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No. 272/January 20

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WILD HAWK HUNTING

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OFFICIAL ADD-ON FOR PC WWII GAME - WINGS of PREY -

WINGS of LUFTWAFFE

- GAMESMEDIAPRO.COM -
(10/10)

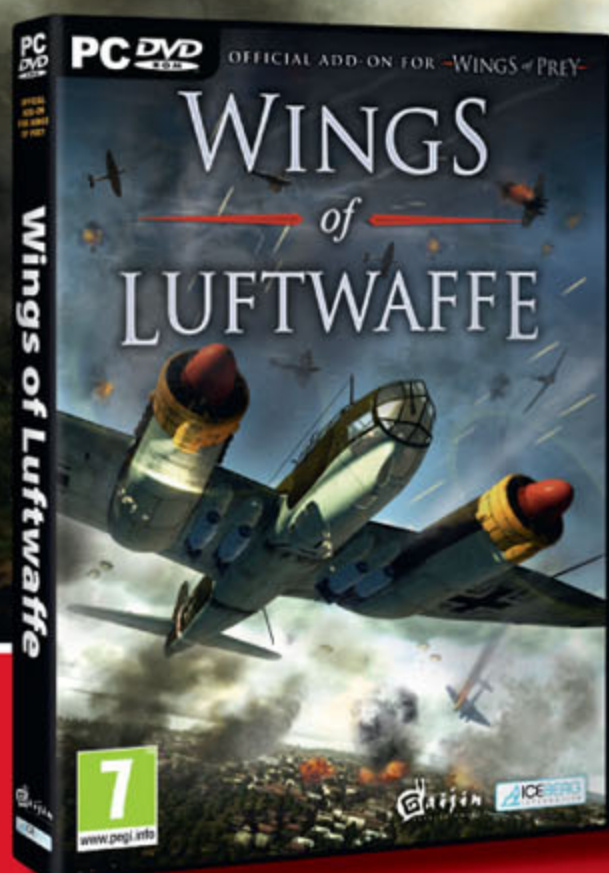
"WINGS OF LUFTWAFFE REFRESHES THE
PARTS OTHER SIMS JUST CANNOT REACH"

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"EVERYTHING FELT PURE AND RIGHT
WITH THIS GAMES ADD ON"

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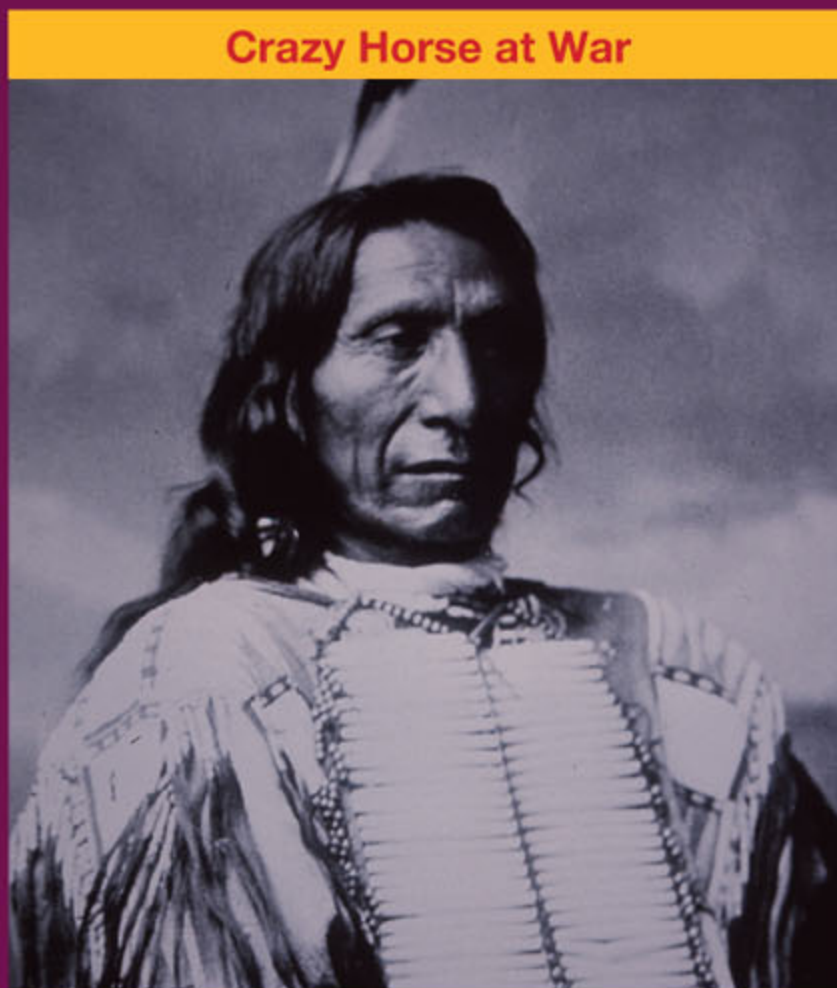
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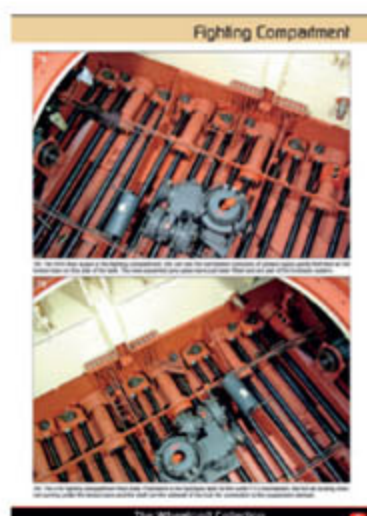
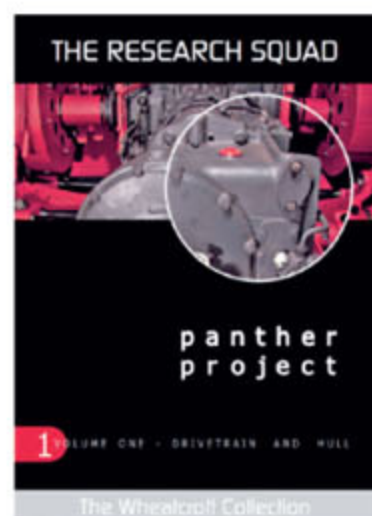
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Readers' Letters

MI readers are invited to write to the Editor. Letters should be addressed to: Tim Newark, Military Illustrated, 3 Barton Buildings, off Queen Square, Bath BA1 2JR. E-mail: timn@fsmail.net

Laughing soldiers

Project 65—The Veterans Charity has created and compiled 'The Laughing Soldier: The British Armed Forces Jokebook' and is teaming up with military history publisher and distributor Casemate UK to produce the book, which is on sale now. Hundreds of free copies are also being sent to troops serving in Afghanistan. The book features all kinds of jokes, each sent in with a message of support for our armed forces serving around the world. Jokes have been sent in by politicians, comedians and celebrities, as well as dozens of ex-forces veterans and relatives of those serving today. The book, a £6.99 paperback, also features forewords by top British comedian Al Murray and triple amputee former Royal Marine Mark Ormrod, author of bestselling *Man Down*.

CEO of Project 65 – The Veterans Charity,

Danny Greeno said 'the idea for The Laughing Soldier came from my love of the legendary "military sense of humour", the unique ability to find humour in the toughest of situations but also for inspiring some of the sharpest humour there has ever been. I know from the work we do with veterans of all ages that a good sense of humour is vital to keeping morale high and to lift spirits in tough times. I hope the many messages of support will also show our troops just how proud we all are of the incredible job they are doing.' All profits from the book will go to PROJECT 65 – The Veterans Charity, helping them to continue their work in funding the vital care and support of armed forces veterans and forces families and establishing new initiatives to offer more support to those who need it most.

Black Watch drama



'Black Watch', the award-winning and powerful theatre play based on interviews conducted by Gregory Burke with former soldiers who served in Iraq, that gets to the heart of what it means to be part of the legendary Scottish regiment, is back in London again at the Barbican Theatre until 22 January 2011. Get a ticket if you can –thoroughly recommended.

Crimean Landscape



This surprisingly peaceful looking birds eye view is one of group of four painted by a serving officer during the Crimean War, c1850, rather different from familiar images of that war. It shows a view looking North-West from the heights behind Sevastopol, with Inkerman in the far distance to the East. Would love to hear from any Crimean war experts who can identify any aspect of it. In those days, officers were trained in military topography as a matter of course, and painting in watercolour, like singing at the piano was part of a gentleman's education. *Theo Woodham-Smith, London*

Picture credit: James Harvey British Art (www.jamesharveybritishart.com)

www.TimNewark.com



Cover: Aerial combat in World War One. Painting by GH Davis.

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QUESTION:

WHO WAS THE COMMANDER OF THE GERMAN LUFTWAFFE?

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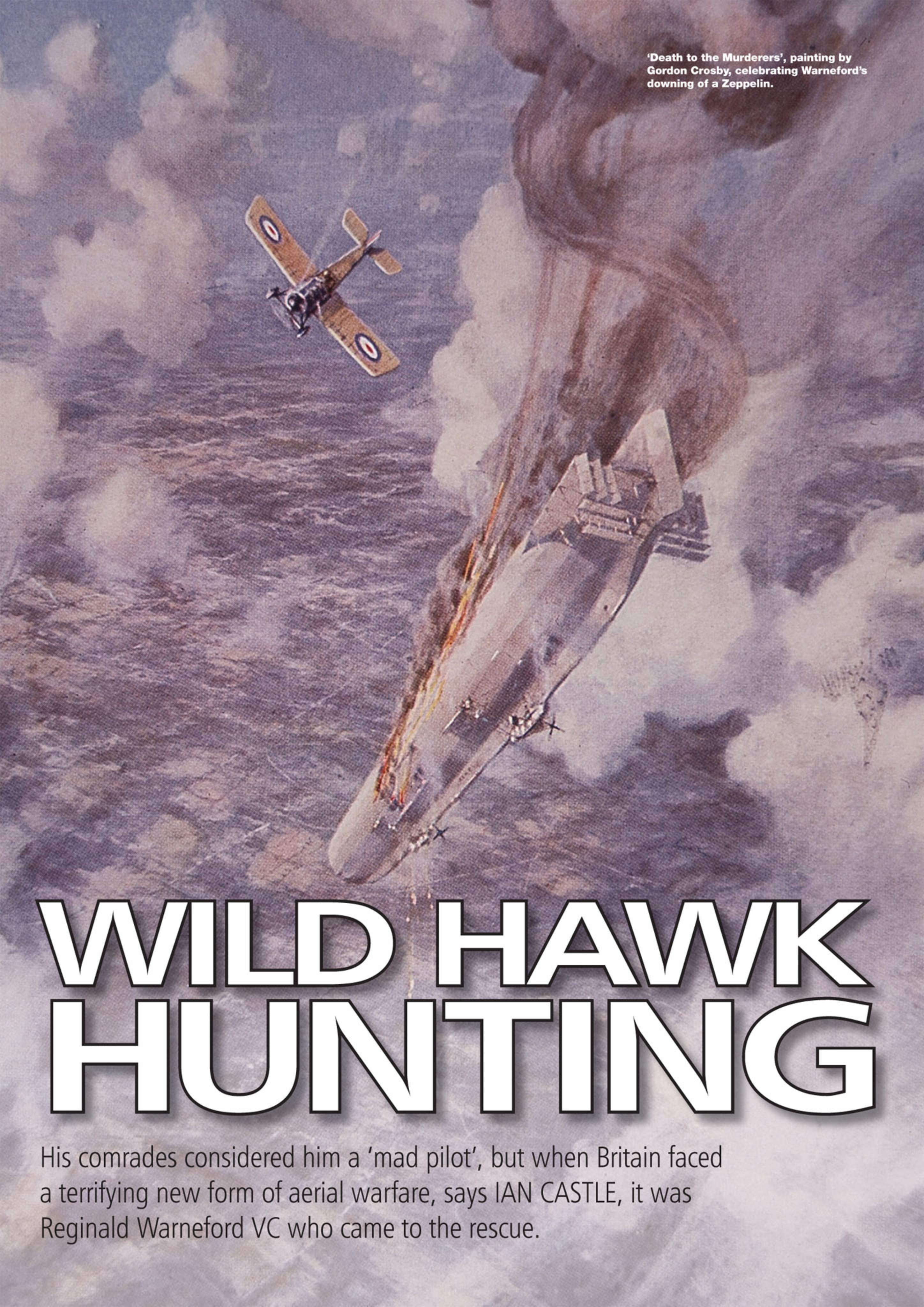
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A dramatic painting depicting a biplane, likely a British Royal Air Force aircraft, attacking a large Zeppelin airship. The biplane is shown in the upper left, banking sharply towards the Zeppelin. The Zeppelin is positioned diagonally across the frame, from the lower left towards the upper right, and is engulfed in flames and thick black smoke. The background is a cloudy sky with a mix of blue, grey, and brown tones, suggesting a battle scene. The overall style is that of a historical war painting.

'Death to the Murderers', painting by Gordon Crosby, celebrating Warneford's downing of a Zeppelin.

WILD HAWK HUNTING

His comrades considered him a 'mad pilot', but when Britain faced a terrifying new form of aerial warfare, says IAN CASTLE, it was Reginald Warneford VC who came to the rescue.

When Europe descended into war in the summer of 1914, a new and terrifying threat confronted the people of Britain – aerial bombardment by Zeppelins. If German airships attacked Britain, initially the country had little in the way of a credible air defence with which to oppose them. It was to be 10 months into the war before Britain could claim its first victory in the air over the Zeppelins. On the day war broke out, the man who was to achieve that success was serving on an oil tanker far out in the Atlantic Ocean—his name was Reginald Warneford.

Tough life

Reginald Alexander John Warneford, known as Rex, was born in 1891, in a remote region of northern India where his father worked as chief engineer on a challenging railway project. Warneford lived an idyllic adventurous childhood in the foothills of the Himalayas, idolising his father to whom he was devoted.

In 1899, however, his parents separated, his mother taking Rex and his four sisters away. His father quickly descended into grief and despair and in late 1900 he was found unconscious in a Bombay street and died in hospital shortly afterwards. Rex was inconsolable in his grief. The following year his mother remarried but the ten-year-old Rex openly rebelled against his new stepfather, causing his mother to send him to school in England under the guardianship of his paternal grandfather, the Reverend Thomas Warneford. At the age of just 11, Rex boarded a ship at Calcutta bound for England all alone, to a country he had never known, to live with a grandfather he had never met. He would only ever see his mother again once, briefly, in London, 13 years later.

In England, Rex briefly settled with his grandfather in Satley in County Durham, and the two quickly became very close before Rex went to board at a school in Stratford-upon-Avon. Rex did surprisingly well at school, excelling in the practical rather than the academic. While there, he avoided team games, learnt to look after himself in a fight and enjoyed long walks on his own. In the holidays, he returned to Satley where he loved listening to his grandfather's tales of military service in India and exploring the remote splendour of the region's barren moors and remote hills. Rex was happy again, but then, in 1904,

his grandfather became ill.

Unable to continue working, Thomas was forced to relocate his family to a semi-detached house in Ealing, west of London. This, the home of his adult daughter, Rex's aunt, and her family, was far removed from the wide-open spaces Rex loved. With his health rapidly deteriorating, it became clear to Rex that his grandfather did not have long to live. Then, in the summer of 1904, money for his school fees ran out, leaving Rex, now aged 13, to wonder what the future held. His aunt and uncle made the decision for him. In January 1905, Rex worked his passage back to Calcutta, to take

Birkenhead. In August 1914, the *Mina Brea* was in mid-Atlantic when news reached the tanker of the outbreak of war, but events in Europe seemed a long way away. In September, the ship ran aground off the coast of Chile and Rex, as First Officer, returned to London to report on the extent of the damage. He arrived back in England in December 1914.

Once in England, the war became very real and Warneford decided it was time to 'do his bit'. The insular world of submarines appealed to him but his application to join the service was rejected. Undeterred, he joined the army in the 2nd Sportsman's Battalion,



Flight Sub-Lieutenant Reginald Warneford at Hendon in February 1915, having just gained his Royal Aero Club Aviator's Certificate.

up an apprenticeship with British India Steam Navigation Company. He knew he would never see his grandfather again; Rex was alone once more.

In fact, Rex adjusted well to his new life at sea and on arrival at Calcutta he served his apprenticeship on a mail boat that plied the waters between Calcutta and Rangoon. Towards the end of 1905 he received word that his grandfather had died. Rex continued to serve with the British India Steam Navigation Company for almost eight years. It was a tough life but one he enjoyed. In 1913, however, bored with catering to the needs of pampered passengers, he took a position on the *SS Mina Brea*, a small oil tanker sailing between San Francisco and

attached to the Royal Fusiliers. But his hope for excitement soon evaporated when, like countless other enthusiastic recruits, the monotonous reality of army training sank in. Searching for a way out, Warneford hit on the idea of the Royal Naval Air Service (RNAS)—that would surely offer the excitement he desired, and bring him closer to the sea. His request for a transfer went through quickly, his commanding officer relieved to rid himself of an obvious restless spirit.

'Hi suckers!'

The RNAS accepted Warneford as a probationary pilot in February 1915—he had much to learn. He did, however, possess the intelligence, nerves and

initiative that the RNAS looked for in its pilots. Warneford passed through a civilian flying school at Hendon in two weeks. It was obvious to those who taught him that he was a natural, but his obvious fearlessness and over confidence raised concerns – concerns not eased when he managed to land his aircraft on top of another and wrecked them both. With advice to curb his impetuosity, he moved on to complete his aviation education at the Central Flying School (CFS).

While at the CFS, Warneford further engrained his reputation for being over-confident in the air, but once his feet were back on the ground he reverted to his insular self, finding it difficult to socialise with the other pilots. This reputation preceded him to his first posting at RNAS Eastchurch, where he did nothing to dispel this image and

struggled with Warneford's behaviour and discipline issues but could not ignore his qualities as an exceptional flier. Even so, an instructor noted that 'It would be difficult to find a wilder or more untameable individual than Rex Warneford.' Gerrard recognised that Warneford had the personality and skill to make an excellent front line pilot and decided to send him to France before his problems at home became insurmountable. On 7 May 1915, Flight Sub-Lieutenant Warneford transferred to No1 Squadron RNAS at Dunkirk in France. Rex was now 23 and had just one month to live.

Wing Commander Arthur Longmore was the senior officer at Warneford's new squadron. He described his new charge as one of the most astounding characters he had ever met. In his

Zeebrugge with an experienced observer. On their return, the shaking observer described how Warneford had spotted a German aircraft over Zeebrugge and chased it over Ostend right down to its own aerodrome, firing at it with a rifle. The observer asked that 'he never again be sent with such a mad pilot.'

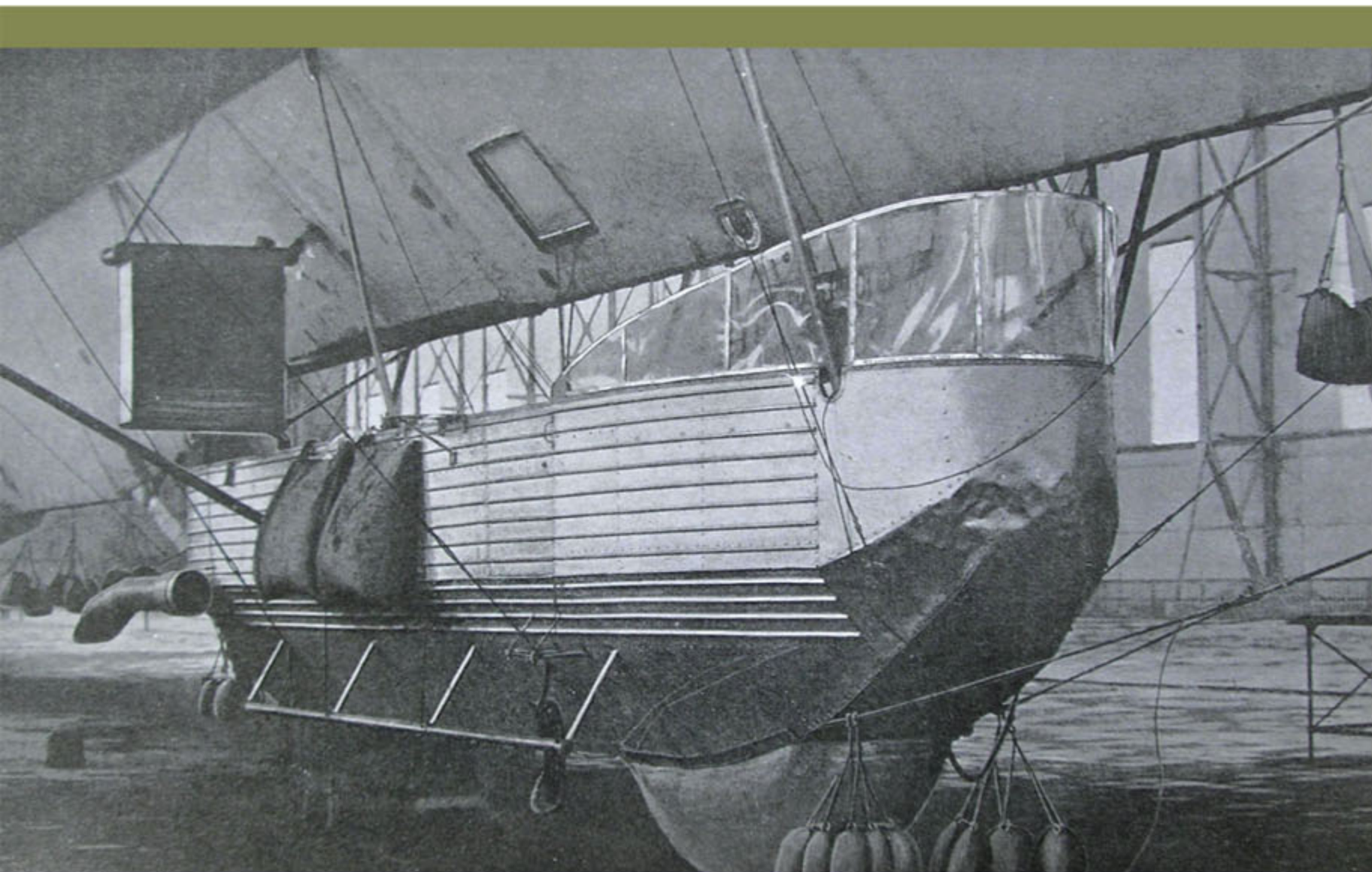
On another flight, Leading Mechanic GE Meddis recalled he was 'unfortunate enough' to be detailed to fly with Warneford but 'lucky enough to survive the ordeal.' Once up in the air, Warneford spotted an enemy aircraft, gave chase and tried to force it down. Meddis 'hung on for dear life... sending up prayers' for his own preservation. The gun that Meddis manned then jammed, at which point 'Warneford leaned out of his cockpit, letting the machine fly itself. He grabbed my gun, wrestled with it for a few minutes, got it going and handed it to me as he climbed back. He pulled us out of a dive, yelling to me to get the Taube, which by a miracle I did, and got home without a scratch.'

In fact, after this episode, Meddis continued flying with Warneford. He recognised that despite his love of taking risks, Warneford was 'a magnificent chap at the controls'. Longmore considered Meddis 'a very brave man.' Meddis and Warneford flew together on patrol for the last time on 17 May 1915 when they attempted to engage a Zeppelin near Ostend but it easily out climbed them. Frustrated, Warneford dived down on a U-boat and steamer leaving Zeebrugge, hurling grenades at them without effect.

Aggressive instincts

Longmore watched Warneford's rapid development closely and decided his aggressive instincts would be ideally suited to fast single-seat aircraft. He allocated Warneford a French-built Morane Saulnier L monoplane. This aircraft, with its single wing above the pilot, became known as the 'Parasol'. For a short period, the Morane Saulnier, with its ability to fire a machine gun through the propeller arc by use of metal deflector plates, was the leader in the aerial arms race.

Warneford's aircraft carried a Lewis gun in front of the cockpit and a bomb rack fitted to the undercarriage to carry six 20lb bombs. Thus armed, Rex Warneford was truly in his element. Longmore gave him his head and from then on the lone airman would patrol up and down the front line hunting for targets, attacking German aircraft and



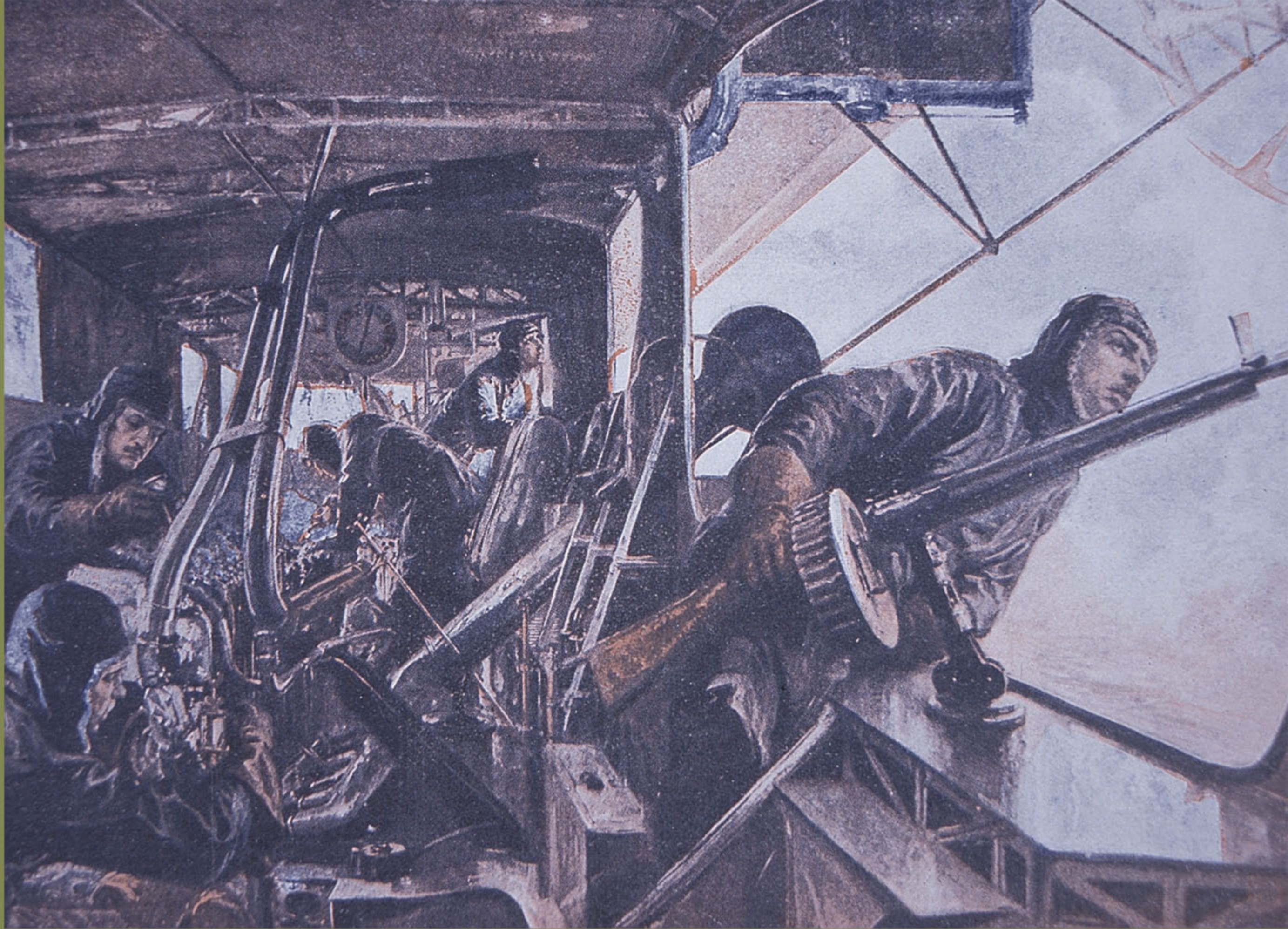
The open gondola of an 'm-type' Zeppelin. It was in a gondola such as this that Alfred Mühler, the sole survivor of the wreck of LZ37, watched his comrades take the fateful decision to jump overboard or burn.

even encouraged it. It was as though he wanted to keep people at a distance and avoid close relationships. The two people he had cared for most, his father and grandfather, had died and left him desperately alone. It appears that when he first arrived at Eastchurch, he entered the Officers' Mess, strode into the middle of the room, drew his gun, twirled it around his finger and fired it into the roof, shouting in an American drawl, 'Hi suckers! What about this?' He turned and walked out, leaving the Mess in uproar. No one even tried to get to know him after that.

The man in charge at Eastchurch, Squadron Commander EL Gerrard,

memoirs, Longmore wrote that Warneford was 'sent over to me from Eastchurch with a very indifferent "chit" to the effect that he lacked discipline and was as wild as a hawk... I told him that he seemed to have an unsavoury reputation but that he would be judged solely on what he did in my squadron and not on his past record at Eastchurch. That night he drove one of my precious Talbot tenders into a ditch and damaged it severely... I said I would give him one more chance and if he offended again out of the squadron he would go.'

The next day, Longmore allocated Warneford an old Voisin aircraft, detailing him to fly a reconnaissance to



Inside the after engine gondola of a Zeppelin, painted by a German artist.

observation balloons wherever he found them. He particularly enjoyed diving on the balloons as their crews desperately struggled to winch them down. He rarely returned from his sorties without some damage to his aircraft—enemy fire did not appear to deter him. So frequent was this damage, but so effective his work, that Longmore allocated him a second Morane Saulnier for times when his first was under repair. The other pilots of No1 Squadron knew Warneford as the ‘Wild Hawk’.

When war broke out, Britain believed the threat to its cities, ports and docks from Zeppelins was a reality. In fact, at the beginning of the war, Germany’s airship fleet was in no position to launch aerial raids on Britain, but the belief in the threat was real. As early as 1 September 1914, Winston Churchill, then First Lord of the Admiralty, ordered RNAS aircraft based in France to attack known airship sheds and any Zeppelins encountered in the air, hoping to destroy the threat before it could materialise over Britain. Yet by the end of 1914, no Zeppelins had yet attacked Britain. The reason for that was simple—the Kaiser,

Wilhelm II, refused to sanction the raids. With his close ties to the British Royal family and a reluctance to be responsible for the destruction of London’s unique historical heritage, Wilhelm held back from authorising aerial attacks. However, as he came under increasing pressure his resolution eventually cracked.

The first Zeppelin raid on England took place over East Anglia on the night of 19/20 January 1915. A combination of bad weather and mechanical problems limited further attacks, but gradually they increased until, on the night of 31 May/1 June 1915, army Zeppelin LZ38 became the first to attack London. The long-anticipated threat had been realised.

Six days later, on 6 June, a navy Zeppelin created havoc over Hull while many miles to the south, the army launched three of its Zeppelins – LZ37, LZ38 and LZ39, from bases surrounding Brussels against London. In fact, their mission came to naught. LZ38 encountered engine problems and returned early to its shed at Evère, while the other two encountered a thick bank of fog as they crossed the English

Channel. LZ37 and LZ39 struggled on for a while before turning back. LZ39 made it back to its shed at Berchem Ste Agathe, but for LZ37 the mission would end in disaster.

Back in England, the Admiralty intercepted radio transmissions and learned that the raiders had aborted their mission. They passed this information by telephone to No1 Squadron RNAS at St Pol near Dunkirk. Longmore wasted no time: ‘I sent off Warneford and Rose on their Moranes to intercept in the vicinity of Ghent, and Wilson and Mills in their big weight-carrying Henri Farmans to bomb the Zeppelin sheds at Evère, near Brussels. I hoped by this arrangement to catch one or more Zeppelins in the air, or, failing that, to set them alight after they had returned to their sheds.’

Flight Lieutenant JP Wilson and Flight Sub-Lieutenant JS Mills set a course for the Zeppelin shed at Evère, about 90 miles away. Despite a difficult flight, Wilson sighted the great bulk of the Zeppelin shed at about 2.20am and released his bombs from about 2,000 feet. Circling away he looked back, there was no great inferno, but he could see ‘a large

column of black smoke.'

Mills arrived over the target after Wilson had departed, but was forced up to 5,000 feet to avoid intense searchlight activity and anti-aircraft fire alerted by Wilson's attack. He released his bombs about 20 minutes after Wilson and as he turned away the shed burst into intense blinding flames as the exploding bombs ignited the hydrogen inside Zeppelin LZ38. Just a week earlier, the same Zeppelin had been the first to bomb London – now all that remained was a burning mass of twisted red-hot metal. At the same time, Rex Warneford was also engaging a Zeppelin, and his evening was to have an even more spectacular and extraordinary conclusion.

limit of the mist, Warneford scanned the horizon and there, about 13 miles away in the direction of Ostend, he spied the unmistakable cigar-shaped outline of a lone Zeppelin. Warneford turned towards the distant airship and began the long chase. The hawk had found its prey.

Oberleutnant Otto von der Haegen, the commander of Army Zeppelin LZ37, his mission aborted, had found his way back to Ostend, then set a course for Brussels via Bruges and Ghent. Flying at a top speed of 76mph, Warneford held the Zeppelin in his sights for about 45 minutes before he caught up with it a few miles beyond Bruges and prepared to attack. The calm and orderly routine in the Zeppelin's control gondola was suddenly broken by the voice of the

previous course, towards Ghent, and, convinced he had shaken off the lone pilot, he ordered the crew to commence their descent towards Brussels. However, it took a little more than a few bursts of enemy fire to deter Warneford.

Warneford took up a position trailing behind LZ37, waiting for another chance to attack, keeping well astern and out of sight to give the airship no cause to climb again. At 2.25am, Warneford was at a height of 11,000ft, when LZ37 began to descend. It was the chance he had been waiting for and he swooped down as quickly as his Morane would allow.

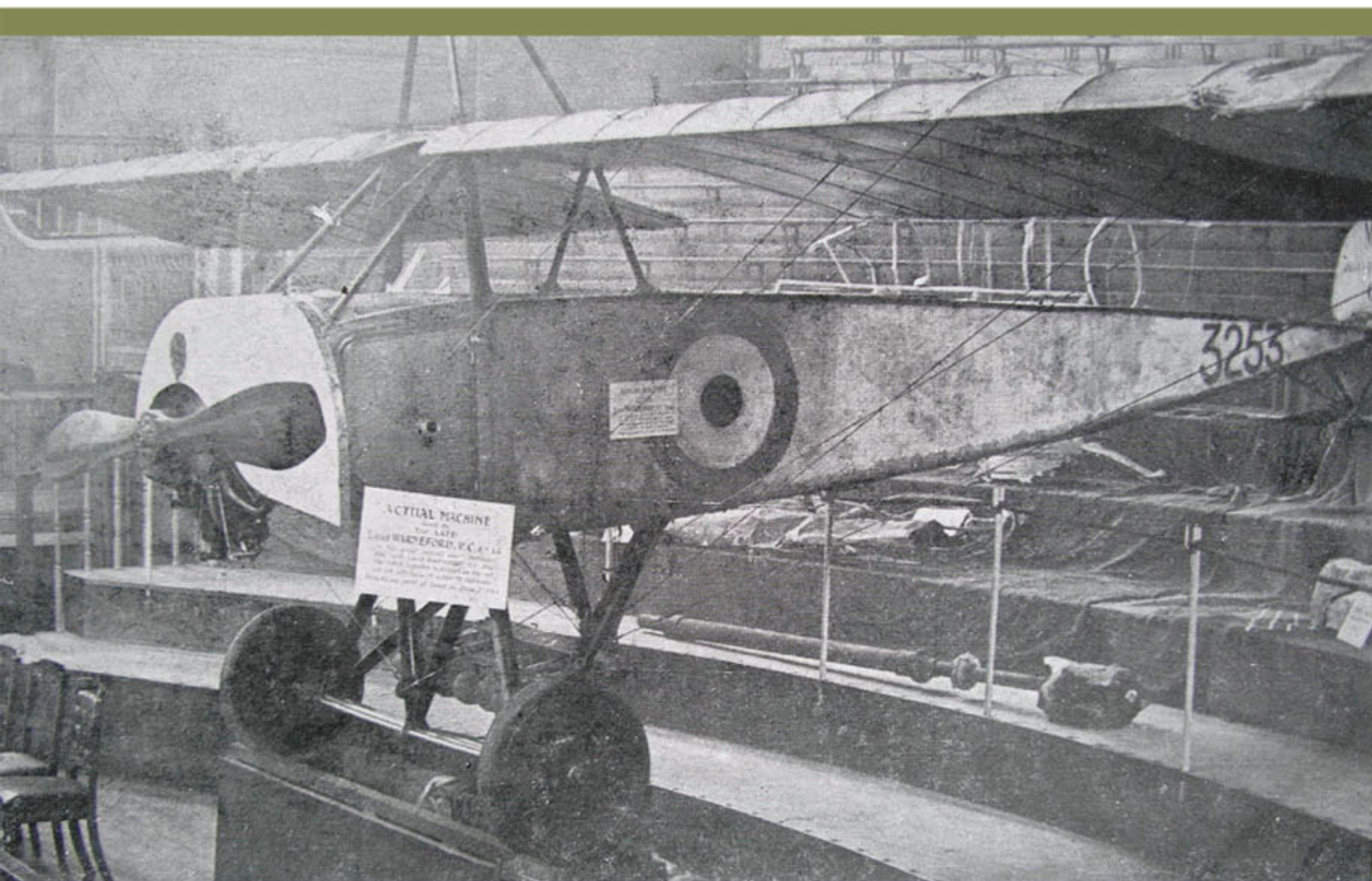
This time, no bright stabs of machine gun fire sought him out and, having got above his quarry, he switched off his engine and began a silent curving descent. By the time he was ready to make his attack, LZ37 had come down to a height of 7,000ft with Warneford perhaps just 150 feet above her. At that moment, as he flew along the length of the great aerial raider, Warneford pulled a toggle to release the first of his bombs. He recalled, 'At that time I thought that it had no effect, I loosed another, but the third definitely did the trick, and I pulled off the remaining three automatically, almost unconsciously.'

Just as he released his sixth and final bomb, he felt the full force of a massive explosion—tossing his fragile aircraft up into the air like a discarded toy. Warneford found himself upside down and out of control. After a few moments, the Morane righted itself but the engine would not restart, leaving Warneford to glide the aircraft down as best he could. While he struggled to maintain control, he saw the flaming mass of LZ37 plummeting to earth beneath him. 'I looked down and watched it burning. I had a strangest feeling of detached curiosity, almost as though its death agonies had nothing to do with me.'

Amazing escape

While Warneford looked on, the worst fears of the crew of LZ37 were about to be realised. One man, Obersteuermann Alfred Mühler, the helmsman, looked around in bewilderment and hauntingly recalled: 'we were encompassed by an increasing and terrible heat. I saw dark shapes of men silhouetted against a ruddy glow as their flailing arms tried to protect their faces. Some of them climbed over the sides of the car and flung themselves into space.'

In another account, he added: 'Slowly I too sank to the floor. Glowing, smouldering pieces of fabric from



Warneford's 'second' Morane Saulnier L monoplane, No 3253, the one he flew the night of 6/7 June 1915. Here it is shown on display at an exhibition after Warneford's great exploit.

Hawk finds his prey

Warneford and Sub-Lieutenant Rose were detailed to intercept the returning Zeppelins, or if they could not find them, they were to bomb the Zeppelin shed at Berchem Ste Agathe. Rose and Warneford clambered into their Morane Saulniers, but as Warneford's machine gun-armed aircraft was undergoing repairs – again – he prepared his second Morane for take off, loaded with six 20lb bombs. Warneford recalls that he set off at about 1.00am, ascending through the mist, but quickly lost contact with Rose. Disorientated in the mist, Rose turned back, somersaulted his aircraft in a bad landing but managed to scramble clear unhurt. Warneford was alone again.

Having broken through the upper

gunner manning the exposed machine gun platform on top of the great bulk of the envelope—an enemy aircraft was approaching.

Von der Haegen immediately released ballast to enable the Zeppelin to climb quickly while the machine guns opened fire on Warneford's tiny aircraft. With no machine gun of his own, Warneford turned away, hoping to gain a height advantage for his bombs, but LZ37 continued to climb, turning to port as it did so to allow the machine gunners a clearer target. Aware that the Zeppelin could easily out climb him, Warneford retreated. He recalled that the Zeppelin gunners ceased firing at him at 2.15am.

Apparently now free of danger, a relieved von der Haegen returned to his

the ship's covering fell on my face and neck... I felt another thunderous crashing and shuddering. The airship had broken up. I lost consciousness.' Yet from this desperate and terrifying situation, Mühler, by an extraordinary circumstance, survived to tell his story.

As the furiously burning wreck of LZ37 rushed towards earth, despite the early hour, the excitement in the sky had not gone unnoticed. In the Mont St Amand district of Ghent, nuns at the convent of St Elisabeth were on their way to chapel: 'We were about to cross over [the garden] when we heard a great explosion. We looked up into the sky and could see a Zeppelin in flames drifting towards our convent. We were terribly afraid that it would fall on us. It came nearer and nearer. The sound of its burning was terrible. There were screams, and pieces of metal began to fall around.'

While the nuns rushed to the dormitory wing where 60 orphans were sleeping, those still transfixed by the falling, burning Zeppelin recalled seeing a dark object falling from the forward gondola moments before impact and crashing through a skylight in the roof of one of the buildings. That dark object was the unconscious Alfred Mühler.

The shock of impact brought Mühler back to consciousness – but his brain struggled to take things in. By a miracle, having dropped from a height of 7,000 feet and smashed through the roof of the convent, he had landed squarely on a nun's bed! 'I was alive. Had I dreamed it all? Or had a miracle happened? How had I got here? Was I still falling? No, I was on a bed, and a nun was standing by me. I stared at her wide-eyed. Above us were the flames crackling loudly.'

Despite his bewildered state, Mühler recognised the danger he was in as the ceiling and walls began to collapse around him, and desperately he sought a way from his burning prison: 'the ship's skeleton lay just outside. I hurled myself against it with all my force, but sprang back. I tensed my muscles. In desperation I made a jump through the distorted half open door... I landed outside amid the burning wreckage of the ship, and dashed through the glowing, smouldering remains.'

Mühler was discovered lying semi-conscious and badly burned in the convent garden. He spent six weeks recovering in hospital. The rest of those on board perished. Two nuns also died in the flames, as did a man and a child he attempted to rescue by leaping from a burning building. Another man

attempting a similar rescue jumped from a second floor window, broke both his legs, but saved the child. Numerous other occupants of the convent suffered injury.

Warneford's adventures

Back up in the skies over Ghent, Warneford kept a tight control on his aircraft as he glided silently down through the mist that enveloped him. He had no idea where he was when the earth suddenly reared up in front of him and he clattered to the ground, coming to rest on the side of a small hill. The time was about 2.40am – he knew he must still be behind German lines. He peered around and saw that a forest lay nearby and a barking dog drew his eye through the drifting pockets of mist towards a farm not far away. His first reaction was to burn his aircraft to prevent it falling into

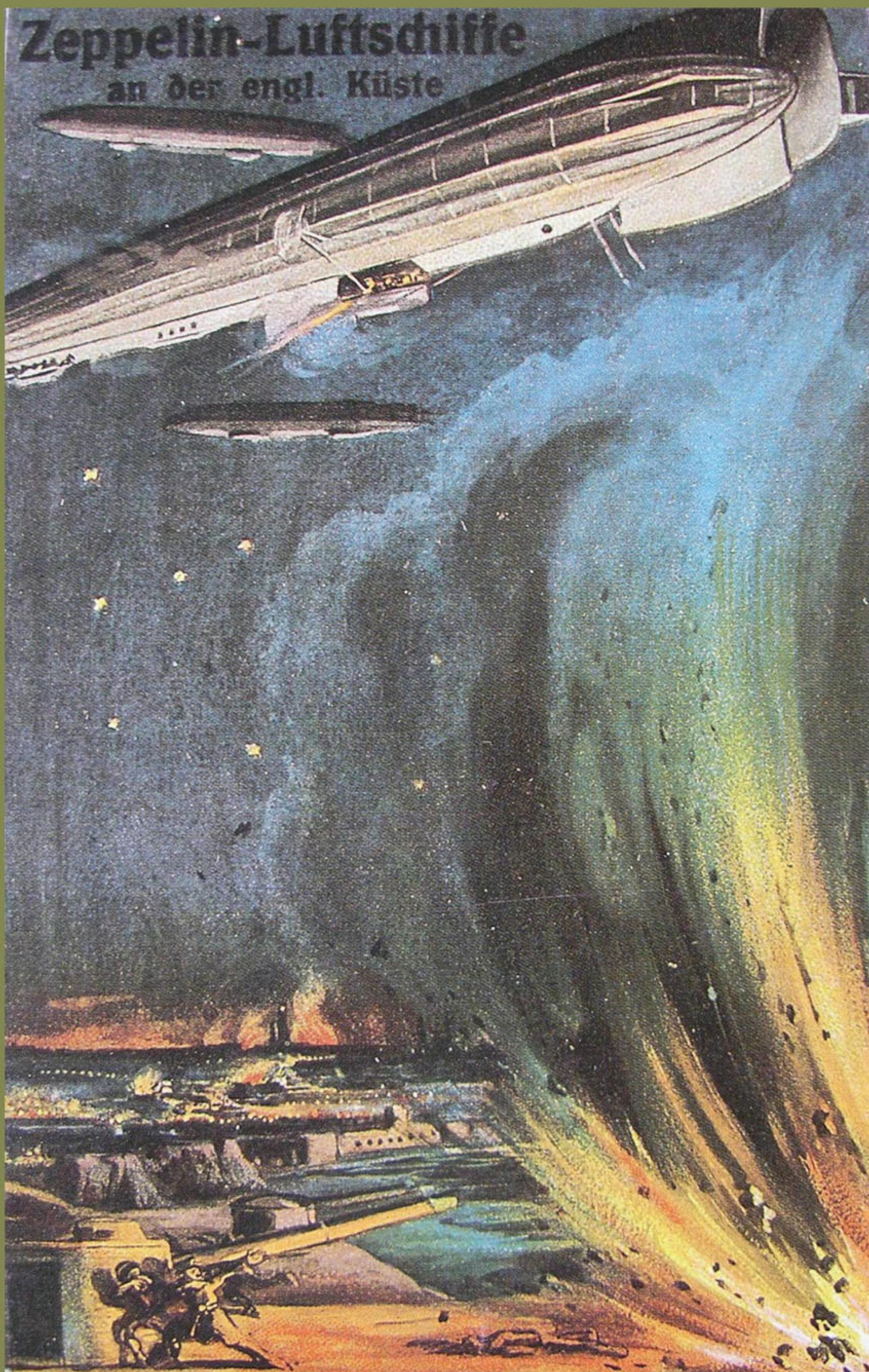
German hands, but as the minutes passed he realised he was undiscovered.

Working quickly, Warneford identified a broken fuel pipe, damaged in the blast, and, in spite of feeling that his 'fingers seemed to be thumbs', had it fixed within 15 minutes. The main fuel tank had emptied as he cart-wheeled in the blast but a little petrol remained in the reserve tank, which he thought might be enough to get him back over allied lines. Just as he completed these temporary repairs, a German cavalry patrol entered the neighbouring wood. They were searching for something and it seemed logical to Warneford that that something was him.

Warneford expected the end to come at any moment but the gloom of the early morning and the swirling mist combined to keep him hidden until, with relief, he heard the patrol move off. It was clear he



'A Duel In The Air', painted by Charles Murray Padday, a popular artist and illustrator. Postcard produced to commemorate Warneford's action on 7 June 1915.



The much-feared aerial threat to Britain, as demonstrated in a German propaganda postcard.

needed to get away as quickly as possible. The problem that now confronted him was how to get the aircraft started with no one to help him—it was a two-man job. Having doped the cylinder heads of his engine with his carefully husbanded petrol, he braced himself and swung the propeller again and again, but the engine always cut out before he could throw himself into the cockpit.

Getting desperate now, Warneford 'pulled and pushed and bounced her along until I got her nose pointing downhill which was luckily pretty steep. Then I swung the prop. I kept on hauling

and pushing her until... she started to move slowly at first and then as she gathered speed and I knew she wouldn't stop, I made a leap for the cockpit... The old girl responded magnificently as I opened the throttle, and managed to climb out of their range.'

Just as he took to the air, the cavalry patrol returned and, as they emerged from the woods, they opened fired with their carbines—but Warneford was away. Initially, he headed south west, having climbed until he burst through the mist, but, aware of the limitations of his petrol supply he descended again to look for

familiar landmarks. Although blinded by the mist, he flew on and then, with great relief, caught a glimpse of a coastline. With his petrol almost exhausted and his engine spluttering, he put his Morane down, coming to a rest close to the cliff edge at Cap Gris Nez, about 14 miles south west of Calais.

Warneford's adventures, however, did not end there. Having destroyed his papers earlier, he could not produce any identification when a group of French soldiers arrived. They marched him off as their prisoner and it took a while before he convinced their officer that he was a British pilot. Then, he recalled, they were overflowing with 'entente cordiale whatever that meant... protests of goodwill and salutes on both cheeks.' They filled his aircraft with petrol and Warneford with brandy, before he finally managed to get away. The exhausted pilot finally got back to his airfield at 10.30am on 7 June.

After making a quick report, he headed for his billet and some much needed rest. While he slept, Warneford's report caused a sensation. The following morning the newspapers in England were full of the story of Warneford's feat, *The Times* trumpeting it as 'one of the most brilliant exploits of the war.' This was just what the government needed. The war news was all doom and gloom and, only a week before, the first Zeppelin bombs had dropped on London, but here was a story to excite the nation.

Propaganda value

Wing Commander Longmore was instructed to keep Warneford grounded 'for as long as his value as propaganda was fully exploited, and until he had returned from London.' While the nation had thrilled to his exploits over the breakfast table, a telegram winged its way to No1 Squadron. It came from the King, George V, and Longmore handed it to Warneford who read it carefully. 'I most heartily congratulate you upon your splendid achievement of yesterday in which you single handed destroyed an enemy Zeppelin. I have much pleasure in conferring upon you the Victoria Cross for this gallant act.'

Warneford was taken aback by the news. He did not seek adulation and preferred the anonymity of life in the squadron, but now others took control of his life. While plans for his presentation in London were being finalised, the French announced they were awarding him the Knight's Cross of the Legion of Honour, which they were to present in

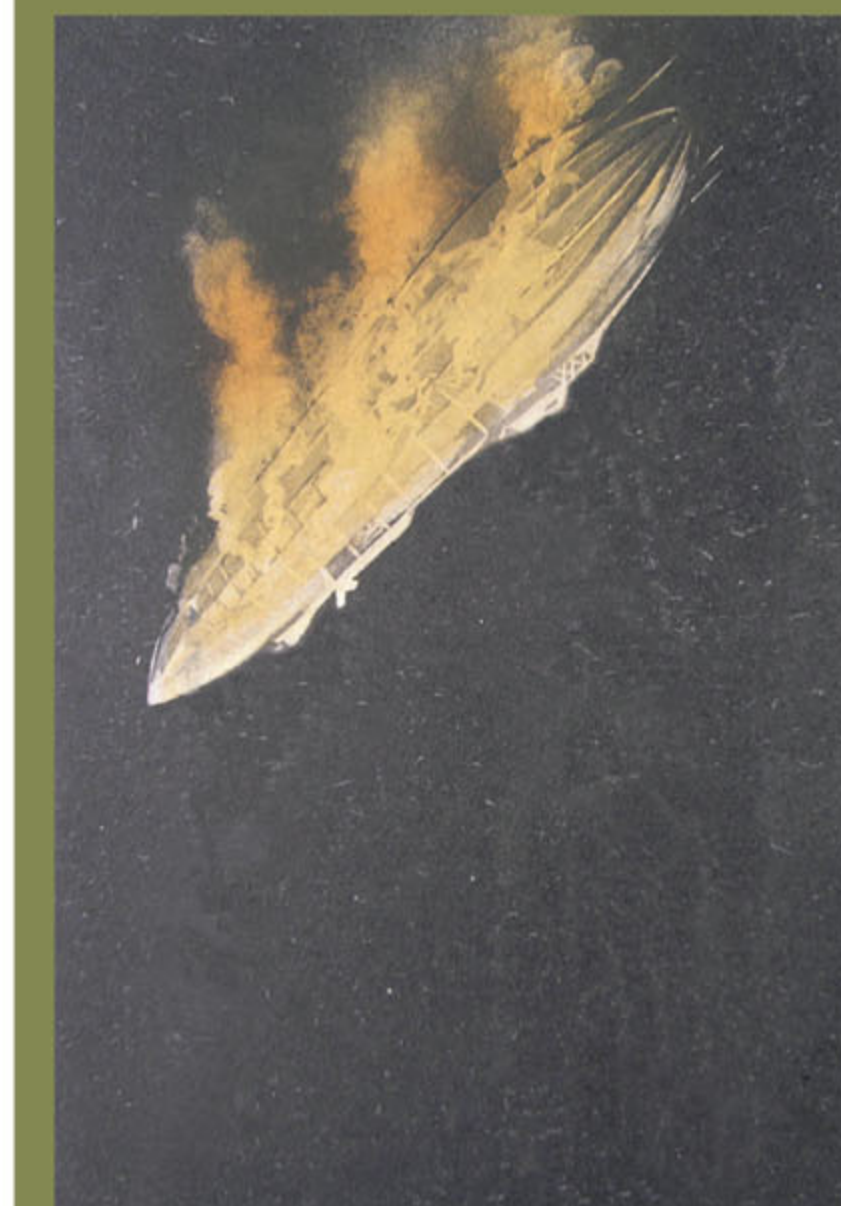
Paris. Conveniently, Longmore needed a new Henri Farman aircraft tested and ferried back from Paris, so his tethered 'Wild Hawk' could kill two birds with one stone.

Warneford travelled to Paris on 11 June, arriving to a civic reception at Coublay airfield. Wisely, Longmore had arranged for a RNAS pilot at the airfield, Flight Lieutenant Michael Marsden, to accompany Warneford. Having got through the first reception, the two men headed to the Ritz Hotel in Paris where they were to stay, to find crowds of well-wishers and another reception awaiting them. When they got to their suite, Warneford suggested they abandon the schedule, but Marsden pointed out the diplomatic complications that could create. So they stuck to the hectic schedule. On 12 June, Warneford received the Legion of Honour and continued on a series of engagements and invitations. Wherever they went, crowds clamoured to get close and touch the hero—or tear a button off his tunic as a souvenir. Warneford found it an alien world, but he endured it.

Finally, on the morning of 17 June, the two men went their separate ways. Warneford was to test the Henri Farman at Buc aerodrome later that afternoon, but in the meantime the French authorities had granted an American journalist, Henry Beach Needham, an interview with Warneford and a flight with him over Paris. Warneford was not keen on the idea but had no choice. After lunch, Warneford, Needham and another RNAS pilot, Lieutenant Robert FitzGibbon—who was on leave—and his wife, travelled together out to Buc. Warneford invited Fitzgibbon to join him on the test flight.

At the airfield, Warneford wasted little time and soon he and FitzGibbon were airborne. The flight was short, lasting just five minutes, but Warneford seemed happy with the aircraft's handling, for once on the ground he called Needham over to take Fitzgibbon's place. Neither Warneford nor Needham strapped on their safety harness, it was to be a short straightforward flight. Warneford was keen to get it over. Exactly what happened next is unclear.

A newspaper report stated the aircraft was at about 700 feet when 'it rocked, the wings met, and it crashed to earth.' The official inquiry surmised that Warneford was coming in to land too high: 'To lose height he dived the machine too steeply, and pulled up too hard. Under the strain the right wing went back and broke. With



The burning Zeppelin plummeting to earth after Warneford's third bomb had exploded and ignited the highly inflammable hydrogen gas.



The dramatic memorial erected over Warneford's grave, subscribed to by readers of the Daily Express newspaper and unveiled in July 1916.



The scene at Brompton Cemetery on the afternoon of 22 June 1915 when Warneford's coffin was carried on a gun carriage, accompanied by a naval escort, to its final resting place.

the propeller smashed by part of the tail, and the engine still running, it was impossible to prevent disaster.'

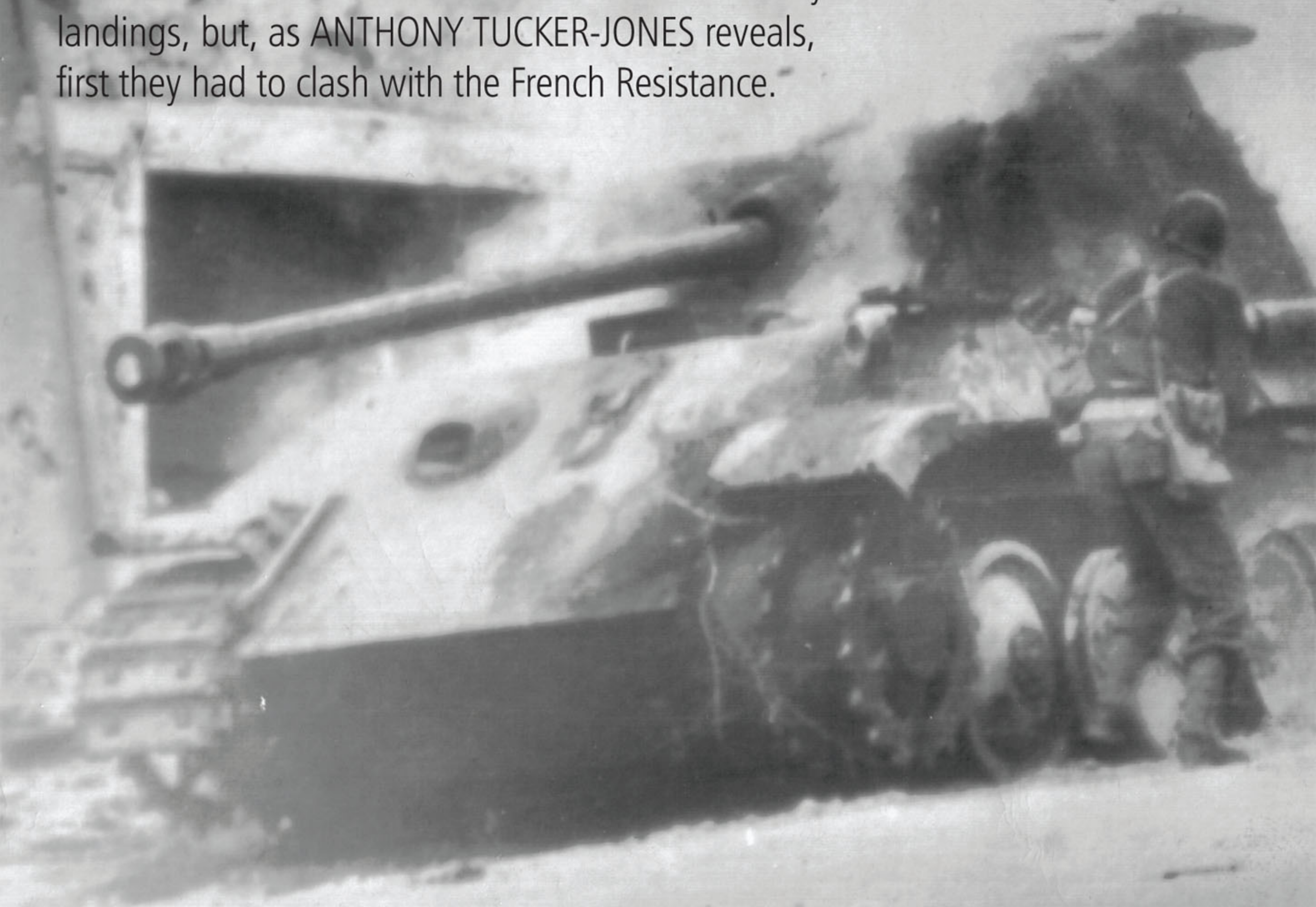
The aircraft rolled over as it fell and both Warneford and Needham slipped from their seats, plummeting to the ground. The journalist, struck by the propeller or wing, suffered multiple head injuries and was dead before he hit the ground. Warneford lay 50 feet away, face down in a cornfield. He was unconscious but still breathing – just. He had suffered terrible injuries—a fractured skull, both arms broken and multiple fractures to his right hip and leg. The Legion of Honour,

which he was still wearing, had pierced his chest. Warneford died shortly after arrival at hospital.

The authorities brought Warneford's body back to England. Thousands turned out to pay their respects to the dead hero. His flag-draped coffin was drawn through the streets of south-west London on a gun carriage to the Brompton Cemetery. His body lay that night in a chapel and then the following day, 22 June, in the presence of his mother, two of his sisters and a crowd of onlookers estimated by the press at 50,000, he was finally laid to rest •

PANZER FIGHT IN NORMANDY

Hitler threw his elite Waffen-SS Panzers at the D-Day landings, but, as ANTHONY TUCKER-JONES reveals, first they had to clash with the French Resistance.



Commanding Panthers from the Das Reich 2nd SS Panzer Division, Sergeant Ernst Barkmann knocked out his very first Sherman tank on 8 July 1944, claiming two more on the 12th. The next day his luck nearly ran out when American armour hidden amongst the Normandy hedgerows almost killed him.

‘First came a clattering noise, then, from behind the hedge, the rounded hull of a Sherman heaved into view,’ he recalled, ‘and behind it, five more.

The first armour piecing rounds hit the leading tank in the hull. Smoke appeared from its open turret hatch. The other Shermans had come to a halt. A second round from the Panther knocked off one of the leading tank’s tracks. The hedge behind which it had sought shelter had a hole in it as large as a man. The damaged Sherman was returning fire... a third round hit its turret. The four tanks that were left opened fire with their machine guns, which merely tore jagged holes in the Panther’s anti-mine coating. One of

them was unwise enough to show its side. A fourth round went right through it. Three of the crew got out.’

Although the Americans moved anti-tank guns behind Barkmann’s panzers, he surprised them by using high explosive shells and his bow machinegun. In response a shell skidded off his turret and he hit the gun with his second shot. The American gunners struck his turret again and a fire broke out. Although he and his crew were forced to bail out, they later got the tank back to their repair company.

American GIs approach a blazing Panzer Mk V – better known as the Panther. Sergeant Ernst Barkmann commanded one of these achieving great success against the Americans until overwhelmed by sheer numbers.



Throughout late June and early July 1944, both the American and British armies had found themselves up against Hitler's battle hardened Waffen-SS divisions.

French Resistance

Just four weeks earlier on 7 June, the very day after the start of the Allied landings in Normandy, General Heinz Lammerding commander of Das Reich received the order to be ready to march north. In the run up to D-Day, while Lammerding grappled with getting his division up to strength and carrying out its training, the

French Maquis or Resistance began to make their presence increasingly felt.

Frustratingly for Lammerding and his men, the actions of the Maquis ensured that what should have been a three-day journey took Das Reich a fortnight. Lammerding signalled General Walter Krüger's 58th Reserve Panzer Corps in Toulouse with his catalogue of woes. He was understandably annoyed that his panzer division was wasting its valuable time fighting the Maquis, which was a role that should be handled by the local security divisions. Large areas were under

the Resistance's control leaving local German forces surrounded and cut off.

By June, Colonel René Vaujour claimed to have 5,000 men under his command. Three months earlier, he had ordered his men in the event of an Allied invasion to cover the bridges over the Dordogne in south Corrèze and northern Lot. Vaujour correctly assessed that Das Reich would move north to reinforce a German counter-offensive and it would fall to him and his men to obstruct it. The SAS were also to conduct Operation Bulbasket with the same goal.

Lammerding's response to the Resistance was to treat them as a partisan army, with predictably brutal results. Throughout May, his command undertook anti-Resistance operations with units raiding Montpezat-de-Quercy, St Céré and Bagnac, Cardaillac Lauze. This culminated on 2 June, when following a Maquis attack, the village of Terrou was burned along with 29 surrounding farms. When the SS discovered a resistance arms dump at Ggeac, 1000 local people were arrested and deported.

On top of the Maquis attacks, only 40 per cent of Lammerding's panzers were serviceable and 70 per cent of his half-tracks and prime movers. Prior to the march north following D-Day, repeated calls for spare parts had fallen on deaf ears, which meant broken down vehicles could not be moved and therefore required infantry to guard them. Six depots had to be set up for the waifs and strays and efforts to commandeer local civilian vehicles produced few results.

The Resistance first really made themselves known at Groléjac after Lammerding moved into the Dordogne region. As Das Reich approached the river crossing, although unprepared, the French opened fire. Fourteen-year-old Maurice Jadel recalled: 'The Maquis had driven unexpectedly into the German column and Marcel Malatray, leader of the group was wounded and later died. The driver was killed outright. I was nearby and [the] Das Reich officer in command, using impeccable French ordered me to push the stalled vehicle out of the way.'

Jadel had a narrow escape, for Das Reich immediately returned fire on the Maquis positions in a nearby hotel. 'I deliberately took my time in pushing the vehicle out of the way,' said Jadel. 'The troop carriers were lined up with their engines running and steel-helmeted German soldiers were glaring down at me... Once I had completed the task, I



Das Reich fought running battles with the Maquis as it drove toward Normandy – these culminated in the massacre at Oradour-sur-Glane when almost 650 civilians were murdered by the Waffen-SS.

walked very slowly away until I turned the corner then ran and joined the Maquis on the railway line. The tanks and troop-carriers stretched back for at least two kilometres and were an overwhelming sight.'

At Tulle railway station, Lammerding's column was yet again ambushed and the resulting firefight left dead on both sides. His patience was running out and on 9 June a proclamation was posted throughout the city: 'Forty German soldiers have been murdered in the most abominable fashion... policemen and gendarmes have made common cause with the communist gangs... 40 German soldiers have been murdered... 120 Maquis will be hanged... for the future, three Maquis will be hanged for every soldier wounded, ten for every soldier killed...'

SS Massacre

Lammerding's progress had not been good. By the 10th, he found his command scattered across the Lot, Corrèze and Haute-Vienne with broken-down panzers and StuG assault guns stretching from Tulle to Montauban. He was also furious that Das Reich continued to waste its time fighting the Resistance and signalled General Krüger saying: 'The task of eliminating this danger must be transferred to the local divisions. Panzer

divisions in the fifth year of the war are too good for this. In the division's opinion, the local forces are quite capable of maintaining order if they are pulled together sharply, given transport and led energetically. Their present isolation is a standing invitation to the terrorists.'

In his heart, Lammerding must have known there was not much that could be done about the lamentable condition of the local second rate infantry divisions. In response, General Johannes Blaskowitz's Army Group G, headquartered in Toulouse, requested Hitler's High Command provide troops to replace Das Reich once it had left Corrèze and Dordogne. A battlegroup from the 11th Panzer Division (comprising two infantry battalions, an artillery battalion and an anti-tank company) was assembled with instructions to contact the 2nd SS in Tulle. These forces arrived on the 11th and Lammerding rolled north to Limoges.

In the meantime, the situation boiled over at Oradour-sur-Glane. Twelve miles north-west of Limoges, male villagers were herded into the church and the village torched. In the bloody mayhem, 646 people were killed by members of Panzergrenadier Regiment Der Führer under Major Otto Dickmann (he was killed in action on 30 June). The actions of Das Reich at Oradour-sur-Glane and

elsewhere during the march north have been hotly debated ever since. What is clear is that Lammerding's men over reacted and the distraction of fighting the Resistance was time consuming and clearly frustrating to the point of killing civilians.

By this stage, Das Reich had suffered 17 dead and 30 wounded. The Maquis, fighting an uneven battle, lost 500 killed and 1,500 prisoners. The French figures included civilian executions. On the 12th, Blaskowitz finally took personal control of the anti-partisan operations and requested that the German High Command formally declare the south-west a battle zone. The Resistance now found itself at war with Army Group G.

Major Stuckler issuing Das Reich's order of the day on the 10th was much more optimistic noting: 'In the course of its advance, the division has already dealt with several Resistance groups. The armoured regiment has succeeded, thanks to a neatly executed surprise attack, in carrying out a knife stroke – a coup de filet – against a band organised in company strength [at Bretenoux]. The division is now proceeding to a rapid and lasting clean-up of these bands from the region, with a view to becoming speedily available to reinforce the fighting men and join the line on the invasion front.'

The Der Führer regiment and the



A column of smouldering SdKfz 251 half-track armoured personnel carriers – as well as the French resistance 2nd SS Panzer had to contend with allied fighter-bombers. Its SS-Panzer grenadier regiments had almost 259 such APCs.

reconnaissance battalion crossed the Loire at Saumur and Tours, where the bridges remained standing, on 13 June. However, due to the lack of transport, by the end of June some units remained stranded in the south of France and it was not until late July that the last elements began heading north. Only 11,195 of Lammerding's total manpower of 17,283 had reached Normandy by 1 July. Nonetheless, the Allies in Normandy faced a very tough and experienced 2nd SS.

Eastern Front

Formed in October 1939 from the Deutschland, Germania and Der Führer Regiments, the SS-VT-Division Reich was placed under the command of SS-Oberstgruppenführer Paul Hausser. It was involved in the campaign in the West in 1940 and after guarding the border with Vichy France was transferred to the Netherlands. The division then took part in the campaign in the Balkans, where a small detachment led by Captain Klingenberg managed to get the Mayor of Belgrade to surrender the city without a fight.

Still under the command of Hausser, the unit took part in the invasion of the USSR and fought on the frontlines until August 1941, when it was withdrawn for refitting. It was sent back to the front in September and a few months later,

commanded by Lieutenant-General Wilhelm Bittrich, it took part in the failed offensive against Moscow. The division was then sent to France in March 1942, with the exception of a small battlegroup, where it was upgraded to become SS-Panzer grenadier Division Das Reich. It returned to the Eastern Front in January 1943, where, under the leadership of Lieutenant-General George Keppler, it took part in the capture and recapture of Kharkov as well as fighting at Kursk.

In April 1944, under Major-General Lammerding, some 2,500 men from Das Reich was transferred back to France to the Bordeaux area, this time to be upgraded to a full panzer division designated 2nd SS. Lammerding had served as an infantry officer and was involved in anti-partisan operations on the Eastern Front. The subsequent actions of his division during its march through France may be partly attributed to his brutal experiences in the east.

In late 1943, he took command of those 2nd SS units on anti-partisan duties and assumed full command of the division on 25 January 1944. There were whisperings that he had been over promoted. It has been argued that he owed his appointment to his relationship with SS-Reichsführer Heinrich Himmler.

Indeed, it was felt that Lammerding's position had more to do with his political allegiance to the Nazi Party rather than any real military aptitude.

Lieutenant-Colonel Christain Tychsen commanded Das Reich's SS-Panzer Regiment 2. By the beginning of June, he had 54 Panzer IVs, of which ten were in the workshops, 39 Panthers and 41 Sturmgeschütz III assault guns. Further deliveries of armour meant that the 2nd SS was to field a total of 83 Panzer IVs, 80 Panthers and 45 StuG IIIs during the fighting in Normandy. Divisional self-propelled artillery consisted of five Hummels and six Wespe, along with the usual towed artillery batteries.

The SS-Panzer grenadier regiments also had 249 armoured personnel carriers. Despite this impressive inventory, spares and ammunition was a major problem for Lammerding, especially parts for the motor transport. The division had less than half the required number of trucks and out of the 1,821 it did have, only 617 were operational. It was obvious that the division would have problems getting anywhere in a hurry. In May, Lieutenant Fritz Langangke was ordered to survey the local railways to assess their suitability for moving the panzer regiment.

Based around Montauban, one



Camouflage was the name of the game to avoid air attack. This German Marder self-propelled anti-tank gun has been turned into a mobile bush.



Allied fighter-bombers and medium bombers constantly pounded Hitler's panzer divisions as they sped toward Normandy.

of Das Reich's first priorities was to absorb about 9000 new recruits as well as replenish its vehicle stocks. The division took receipt of 55 Panzer IVs and 37 Panthers toward a compliment of 62 of each, to supplement the existing 30 Sturmgeschütz. On 16 May, General Heinz Guderian arrived for an inspection tour and watched their exercises, particularly night movements. Lammerding and his men had already been warned that they would not enjoy the same level of freedom of movement that they had experienced in Russia, where the Russian air force was little more than a nuisance.

Tank clash

Arriving in Normandy, Major Otto Weidinger, who had replaced Sylvester Stadler as commander of Der Führer, expected to take part in a major counter-attack to drive the Allies back into the channel. Instead, his men were directed to plug a gap in the line besides Panzer Lehr. Its commander, General Fritz Bayerlein, was amused when he heard they wanted to take the offensive, remarking: 'It will be a miracle if we can stand where we are.'

During June, Battlegroup Weidinger, consisting of elements of Panzergrenadier Regiments 3 and 4 along with the 9th SS, resisted the British Epsom offensive. Then, during July, elements fought in the American sector. Battlegroup Weidinger came under von Choltitz's 84th Corps on 5 July, when it was tactically attached to the 353rd Infantry Division for the defence of La Haye-du-Puits and Monte Castre. They launched a counter-attack against the Americans on the afternoon of the 7th, striking the American 79th Infantry Division on the recently won Montgardon ridge south of La Haye-du-Puits. The Germans inflicted 2000 casualties, but American tanks, tank destroyers and artillery claimed three panzers, and the attack died out. Such was the 79th's mauling that it had to be withdrawn to be refitted.

Holding a line at Les Landes-Lemonderie, two companies from Das Reich were attacked by the US 83rd infantry Division on 7-8 July. The US 9th and 30th Infantry Divisions pushed on Lé Desert, after crossing the Vire-Taute canal. In the meantime, the US 3rd Armored Division attacked north-west of St Lô. On the 9th, elements from Das Reich then ran into the 30th Infantry Division's right flank near Lé Desert. The SS though were driven back by American artillery fire.

Das Reich, however, caught a company of the US 743rd Tank Battalion pursuing two Panzer IVs on the 9th near Lé Desert. The surprised American tanks reeled back with the loss of 12 Shermans. By the close of the 10th, the division had claimed 98 enemy tanks in the space of just eight days. On the 13th, Das Reich knocked out another 30 American tanks.

The SS Panzertruppen's morale was high, but the Americans' limitless resources dismayed them. Das Reich, like all the other panzer divisions in Normandy, was plague by ammunition and fuel shortages. Due to the lack of supplies, by 11 July, they had lost 22 tanks, seven guns and seven lorries. By the end of the month, the 2nd SS was the

only significant formation rated suitable for offensive operations within 7th Army. It had 37 Panzer IVs, 41 Panthers and 25 StuG assault guns available for combat. It was tasked with stopping the Americans seizing the main coastal road that led to Avranches, the best north-south route in the Cotentin peninsula. At the time of Cobra, Das Reich were supported by two 105mm artillery companies from Artillery Regiment 275, formally part of the infantry division of the same number.

On the 26th, Das Reich rushed to fill the gap left by Bayerlein's decimated Panzer Lehr, having deployed its panzer regiment to the St Aubin-du-Perron area, south of the Périers-St Lô road, the previous day. Some of those tanks south of Périers were sent south-east to Marigny. Two companies from Das Reich counter-attacked elements of the US 3rd Armored Division on the outskirts of the town that afternoon.

Nine Shermans dead

It was now that Ernst Barkmann's Panther, caught in the open, was attacked by four fighter-bombers and caught fire. Working through the night, his men had the tank up and running by the morning. At the village of le Lorey, north of the St Lô-Coutances road, they were confronted by comrades fleeing American Shermans driving from St Lô, where Das Reich's panzers were supposed to be deployed. Barkmann decided to try and halt elements of the US 3rd Armored Division trundling down the Coutances road on the 27th, at the junction of the Lorey road and the N172, between Coutances and St Lô.

When the Americans drove into view, Barkmann's gun-layer, Poggendorf, opened fire at 200 metres. The Americans tried desperately to back off, but soon the road was a twisted mess of smashed jeeps and half-tracks. Although the roar of the gun, the clang of the spent shell case and the hum of the ventilator sucking out the noxious cordite fumes, deafened his crew, Barkmann kept a constant look out. Two Sherman tanks advancing to the left of the road were dealt with, though not before his Panther took two shuddering hits to its armour.

The Americans then called in fighter-bombers to shift the stubborn Barkmann, damaging his tank's running wheels. Again, two more Shermans trying to outflank him, found their guns had no effect and paid a deadly price.

In the process of halting 3rd Armored, Barkmann destroyed up to nine Sherman tanks, but his tank was damaged and had



These Germans are getting a closer look at a knocked out Panzer IV. Such was the ferocity of the blast (probably caused by the ammunition igniting) that the turret was blown clean off. It is unlikely any of the crew would have survived.

lost a track. Miraculously, although his driver was wounded, they managed to withdraw to Neufborg. Despite holding up the Americans, the end result was still the same. Left behind by the rest of the Das Reich, Barkmann's Panther with two others in tow reached Coutances on 28 July, only to find the Americans already in the city. Two days later he had lost all three panzers and he and the crews made their way back to their own lines on foot.

Meanwhile, panzers of Lieutenant Schlomka's 2nd Company, previously deployed east of Carentan, were ordered to hold the Americans west of Périers. Following a briefing by Lieutenant-Colonel Tyhsen, Fritz Langanke and his platoon moved into position to be greeted by heavy artillery fire. Langanke's tank then got stuck in a ditch and had to be towed out. The American advance was brought to a brief halt and at nightfall the panzers withdrew. The 2nd Company were then ordered to block the St Lô-Coutances road.

The ever-present Allied fighter-bombers did all they could to hamper the 2nd SS. 'As soon as we turned onto it, in the direction of St Lô,' said Langanke, 'we were engulfed in the heaviest fighter-bomber activity I experienced

during the war. The only thing similar occurred during the breakout from the encirclement at Falaise/Trun. The light coloured ribbon of concrete of this road was littered, as far as we could see toward Coutances, by wrecks of vehicles and other military equipment. Some of it was burning, smoking, entangled, or just abandoned. Here and there we saw dead or wounded soldiers. Once our small unit had been spotted driving on the road, fighter-bombers dove on us from all sides, dropping bombs and firing onboard weapons. To catch our breath, we pulled off the road to the right for a while into an orchard. That did not help very much as that area was being hammered as badly.'

Like all German tank crews, they faced the dilemma of bailing out or staying inside their tanks, either option could be equally fatal. In this instance, Langanke's panzer drove on, passing a knocked out Panther. 'As far as we could see along the road,' he observed, 'there were German and American vehicles of various types, cars, trucks, half-tracks, tanks, some of them burning and entangled. In between, German and American ambulances were driving back and forth, flying Red Cross flags, recovering dead and wounded who were strewn on the road

Like a Cobra

Professor MRD Foot, in his official history of the French section of the Special Operations Executive, wrote: 'The extra fortnight's delay imposed on what should have been a three day journey may well have been of decisive importance for the successful securing of the Normandy bridgehead... the Germans so thoroughly mauled that when they did eventually crawl into their lagers close to the fighting line... their fighting quality was much below what it had been when they started.'

'The [Das Reich] division might be compared to a cobra, which had struck with its fangs at the head of a stick held out to tempt it: the amount of poison left in its bite was far less than it had been.'

or still in their vehicles.'

There was a pause before the American armour opened fire amidst the chaos and Langanke's panzer beat a hasty retreat, taking up an ambush position. That evening, Schlomka appeared and guided them back to the regiment in the Coutances area. On the night of 29/30 July, elements of Das Reich, including Langanke, battered their way out of the Coutances pocket, allowing troops from a number of divisions to escape.

American fighter-bombers

Lieutenant Otto Baum, assuming command of both Das Reich and the 17th SS Panzergrenadier Division, with his Corps commander's permission, withdrew his troops towards Brehal, south-west of Coutances, to avoid the westward moving American Army. This was countermanded by General Hausser, 7th Army's commander, who ordered them towards Percy, to the south-east.

A major battle ensued at the crossroads south-west of Notre-Dame-de-Cenilly as Das Reich attempted to force a passage toward Percy on the 28th. One column of 30 panzers and 2,500 men, led by a Hummel 150mm self-propelled gun named 'Clausewitz,' became trapped after the lead vehicle was knocked out. In the subsequent fire-fight, the American 2nd Armored Division devastated most of this column. At La Pompe, about 15 Panzer IVs from Das Reich and 200 paratroops successfully forced the Americans to fall back, but they could get no further.

Unable to get through, the bulk of Das Reich and 17th SS were trapped around Roncey, west of La Pompe. American fighter-bombers caught 122 tanks, 259 other vehicles and 11 pieces of artillery in the Roncey pocket on the 29th, reaping a cruel harvest of tangled metal. The 2nd SS Panzer's Panzerjäger battalion lost some of its self-propelled guns, most notably Panzerjäger 38(t), abandoned in the shattered streets of Roncey.

About 1000 dazed survivors, with almost 100 vehicles, including several dozen armoured vehicles, who escaped the Roncey pocket, broke through at St. Denis-le-Gast to the south. By dawn, the town was back in American hands and the Germans had suffered 754 casualties



At the crossroads south-west of Notre-Dame-de-Cenilly, Das Reich desperately fought to reach Percy on 28 July 1944. One column of 30 panzers and 2,500 men, led by a Hummel self-propelled gun named 'Clausewitz' (seen here), became trapped with devastating results for the division.

and lost a further seven panzers and 18 other vehicles. Only a battalion of panzers from Das Reich and elements of 17th SS managed to escape the chaos. Near La Baleine, to the south-east of St Denis, RAF Typhoons caught those trying to flee, knocking out nine panzers, eight armoured vehicles and another 20 vehicles, leaving dead Germans strewn everywhere.

Christian Tychsen, Das Reich's panzer commander, was killed at the crossroads near Cambry, south-west of Roncey, on 28 July when the vehicle he was travelling in bumped into an American patrol. Rudolf Enseling, commander of the 1st Battalion, succeeded him. Two days later, the Americans reached Granville, about 11 miles north-west of Avranches, where Barkmann's Panther had retreated to. He and his crew abandoned their tank the following day.

The Americans, sweeping westward, arrived at the well-defended Breton ports of Brest and Lorient on 6 and 7 August

respectively. German forces in Brest would hold out until mid-September, while the garrisons in Lorient and St Nazaire did not surrender until the end of the war. This mattered little, as by August, Le Harve and Antwerp had much greater allure for the Allies.

In order to close the gapping gap between the Vire and Avranches, Hitler foolhardily decided to counter-attack, a move that would force his remaining panzers further into the noose. For the attack on Avranches, on 6 August, Das Reich with just twenty to twenty-five tanks was to take Mortain and the hills to the west. Elements of Panzer Lehr's reconnaissance battalion were assigned to Das Reich to screen their southern flank. It proved highly successful in its mission, though groups of Americans remained cut off in their rear.

Fighting retreat

Lammerding's men swept into Mortain,



These knocked out Panthers belonging to Panzer Lehr have been shunted off the road and were photographed in mid-July. Left behind by the rest of the Das Reich, Barkmann with three surviving Panthers reached Coutances on 28 July only to find the Americans in the city.



By early June 1944, Das Reich included 54 Panzer Mk IVs, though a number were in the repair shop; Lieutenant-Colonel Christian Tychsen commanded SS-Panzer Regiment 2.



An American M5 light tank—such armour received a mauling at the hands of the Waffen-SS. Das Reich surprised the US 743rd Tank Battalion at Le Desert on 9 July 1944, wreaking death and destruction.

brushing aside elements of the American 30th Infantry Division by 0230 and attacked the high ground to the west. However, an American infantry battalion, holding Hill 317, blocked 2nd SS' further progress toward Avranches. They could have bypassed it but would have been exposed to American fire from the hill. General Hausser visited Das Reich's command post at 1000 on the 8th and told them the attack would be renewed after the 47th Panzer Corps had received additional tanks promised by Hitler. The 9th Panzer Division was to be diverted to Mayenne to seal up a breakthrough in the 81st Corps' front line. At 1400, Das Reich counter-attacked the northern flank of the American 35th Infantry Division, which had moved south of Mortain, between the 30th Infantry and the 2nd Armored at Barenton.

Then the Americans broke through north of Mortain, in 1st SS Panzer Division's area, threatening Das Reich's northern flank and the division came under heavy artillery fire. American Shermans were also soon pushing up from Barenton. The failure of the Hitler's ill-advised Avranches/Mortain counter-attack sealed the fate of 5th Panzer Army, Panzergruppe Eberbach and Hausser's 7th Army.

At 1800 on 10 August, Das Reich came under the control of Krüger's 58th Reserve Panzer Corps, having previously been under the operational direction of General von Funck's 47th Panzer Corps. The division was pulled back to the main line of resistance just to the east of Mortain. Elements of Das Reich were involved in heavy fighting and on the 11th destroyed 19 American tanks. Despite all this fierce action, the division still had well over 13,000 men and was far from

destroyed. Successfully withdrawing east, Das Reich did not end up in the Falaise pocket and counterattacked against the advancing Allies to help some of those trapped escape.

On 13 August, 1st SS and 2nd Panzer were thrown piecemeal into the fight. The 10th SS launched a counter-attack against the Americans the following day. It was supposed to have included 1st SS, between Carrouges and La Ferté-Macé, 2nd Panzer in the Ecouche area and 116th Panzer in Argentan, but with only 70 panzers remaining these kept being siphoned off to plug emerging gaps along the southern front. The 10th SS met an American attack on the 14th, with a small and short barrage, followed by a counter-attack deploying just eight panzers supported by panzergrenadiers, north of Domfort. The following day, this weak force was driven back, but not without a fight and the exhausted 10th SS was finally removed from the line.

The truth was 5th Panzer Army (a re-designated Panzergruppe West), Panzergruppe Eberbach and 7th Army were well and truly trapped. In the Falaise salient was the cream of the German tank forces. To the south the 10th SS, 9th, 1st SS, 2nd, 116th, 2nd SS Panzer Divisions and 17th SS Panzergrenadier Division respectively, were deployed from west to east resisting the Americans

Hitler grudgingly finally agreed to let the German Army withdraw through the Argentan-Falaise Gap. The 2nd SS Panzer Corps (Das Reich, 9th SS, 12th SS and 21st Panzer Divisions) were to hold the northern flank against the British and Canadians and 47th Panzer Corps (2nd and 116th Panzer Divisions) were to hold the south against the Americans while the remains of 7th Army, 5th Panzer Army

and Panzergruppe Eberbach conducted a fighting retreat. Das Reich were thrown against the British, moving southward towards Trun on the eastern side of the Dives, just north of the main crossing point at St Lambert.

Tanks of the Polish 1st Armoured Division had taken up position on Points 262 and 239, at the foot of Mont Ormel, which dominates Chambois and St Lambert-sur-Dive on the 19th and were shelling the exit route from the congested Falaise salient. The following day a number of Das Reich's Panzer IVs and Panthers stormed up Hill 239 from where they shelled Hill 262, knocking out five Polish tanks, gaining valuable time for the lucky survivors who were still streaming eastward.

By this stage, the escape route was just five miles wide, though it would not be completely sealed for another two days, and the rapidly shrinking pocket measured just seven miles by six. Outside the mouth of the pocket on 20 August, 2nd SS Panzer Corps finally attempted to reach the trapped remnants of 7th Army. Directing the attack from its HQ at Vimoutiers, they launched the operation at 0400 hours.

To the south of Vimoutiers, two battlegroups from the 2nd SS struck toward Neauphe-sur-Dive and St Lambert. Under pressure from German paratroops within the pocket, the Poles were forced to relinquish control of some of the roads and up to 4000 paratroops supported by three tanks from Das Reich escaped. When it was clear that all was lost, Das Reich made for the Seine. During the campaign, the division claimed over 200 enemy tanks for a combat loss of 75 panzers, with another 30 abandoned around Falaise for the want of fuel and spare parts •



Chief Crazy horse of the Oglala Sioux,
painted by Robert Lindneux.
(Peter Newark's American Pictures)

Crazy Horse at War

The greatest war leader of the Lakota Sioux, Crazy Horse was feared and respected by tribal and white foes alike. ARNOLD BLUMBERG uncovers the secrets of his triumphs on the battlefield.

It was close to 3.50 pm on 25 June 1876, when Crazy Horse, premiere fighting warrior of the Lakota-Sioux nation, scanned the valley of the Little Bighorn River just south of a large Indian village made up of thousands of Sioux, Cheyenne, Sans Arc, Miniconjous, Hunkpapa and other Lakota peoples. What he saw gladdened his heart and stirred his fighting spirit—the bluecoats, 130 in number under Major Marcus Reno, who had just half an hour earlier attacked the village, were in a panicky head-long retreat across the river pursued by hundreds of Indians.

As he contemplated the next move against the scattered and disorganized soldiers racing for the protection of a hilltop to the northeast, his keen eyes suddenly noticed a larger body of troops climbing a ridge, two miles due north, that commanded the lower end of the Indian encampment.

Just then Short Bull, a close childhood acquaintance, rode up joking, 'Too late! You've missed the fight!'

'Sorry to miss this fight!' Crazy Horse laughed. 'But there's a good fight coming over the hill.' Pointing north, Crazy Horse said: 'That's where the big fight is going to be. We'll not miss that one.'

Turning his horse toward the Indian village, Crazy Horse entered the almost deserted Oglala circle, and, after praying and making offerings over an open fire, entered his tipi, donned a white buckskin shirt and leggings before riding toward the sound of gunfire to the north. Soon, he would help orchestrate the most memorable and controversial event in US military history.

Curly Hair

In the fall of 1840, at the Belle Fourche River, just northeast of the mountain range known as the Black Hills, in what is today southeast Wyoming, was born the second child and first son of Indian woman Rattle Blanket Woman, of the Miniconjou tribe, and her husband Oglala holy man, Crazy Horse. From the first, the newborn's father and mother believed their son would grow in to a wise and brave leader of the Lakota and thus set him apart.

The proud parents were correct that their son would be different to the other tribal members, but at first not in the way they hoped. By his fourth birthday, the boy, called Curly Hair due to his thick shiny black mane, was growing and his appearance was changing. Most notably, his hair grew lighter to a medium brown color, and his skin tone was also lighter

than usual for a Lakota child. Trying to detract attention from these unusual physical characteristics, the boy's family members nicknamed him Light Hair.

As Curly Hair grew, he absorbed the deepest values of his society. At his father's side, he heard tales of the ancient wars of the Lakota, of the dashing exploits of fabled warriors of his people, who he would model his adult life on. By his fifth birthday, he was given a bow suited to his size and strength. In 1845, Rattle Blanket Women, Curly Hair's beloved mother, committed suicide by hanging. Gossip linking her and her husband with adultery, drove her to this

As Curly Hair approached adolescence, he became immersed in the Lakota spiritual belief system that dictated that everything in the natural world was animated by a mysterious force that his people called wakan. The totality of all these powers was Wakan Tanka, a resource that a human could increase which would advance him socially and aid in his personal growth. It was believed that Wakan Tanka would give one unmatched powers in warfare.

The youth took the need to build himself up spiritually very seriously as a way to turn such power to his people's service. As a result, he became a brooding



Intertribal warfare painted on a tipi cover. Crazy Horse was an effective commander against white and native foes. (Peter Newark's American Pictures)

disparate act. Within a year, the boy's father brought two new women in to the family as his wives.

Fragmentary as they are, all sources suggest that the family tragedy had a traumatic affect on Curly Hair, shaping much of his adult life. After losing his mother, the young boy became isolated. Curly Hair dropped out of the usual children's activities, instead following his grandfather Makes the Song to council meetings where he silently watched the debates held by the elders. He would often ride his new pony in to the hills to sit and think alone.

introspective lad. As Curly Hair entered his teens, he more and more took on the responsibility of providing for his family. His proficiency with the bow and arrow allowed him to accompany the older men in his clan on their hunting expeditions, which brought in to their encampment deer, elk and antelope.

While pondering the possibilities of becoming a respected fighting man of his people, he was affected by different warrior societies, collectively referred to as 'Dog Soldiers', growing in influence in the Lakota and other Indian nations. Some opposed the whites while others



Plains Indians hunting buffalo, painted by George Catlin c1835. Through hunting, Crazy Horse learned many skills that would become useful in fighting. (Peter Newark's American Pictures)

supported an American alliance. Although Curly Hair would grow in to the classic individualist, instinctively mistrustful of group psychology, the politicization of the warrior factions became fundamental to his later career. By his mid-teens, he had acquired a cynicism towards white men, which only increased with time and contact with them. That cynicism would turn in to fear and hate as the events of 1854 and 1855 unfolded.

Grattan Massacre

During the summer of 1854, Curly Hair's people were camped near the United State's military post known as Fort Laramie, located in Wyoming, to receive their annual annuity from the government. After a white settler's cow was slaughtered for food by some of the starving Indians, one of the army officers stationed at the fort—Lieutenant John L Grattan, 6th US Infantry Regiment—insisted on arresting the culprit. Taking 30 men of Company G and two light artillery pieces, the young West Point firebrand marched the eight miles to the Indian camp and demanded that the man responsible for the death of the cow be surrendered to him. The chief of the Brule village refused to hand over the man, since he was an honored guest and Lakota tradition required that he be protected.

After a 45 minute heated discussion,

some of the soldiers fired at the Indians. The Native Americans returned fire and the army's cannons joined in. As the troops reloaded artillery and muskets, the Indians overwhelmed the whites, killing Grattan and five of his gun crew. The rest of the soldiers fled back toward the fort with the Brules hot on their heels. Appearing at this point in the fight was a band of Oglala, whose chief begged his men not to allow the fleeing soldiers to be killed by the pursuing Brule warriors. The Oglala braves refused to intervene, even stopping their leader's attempts to halt the massacre until all the soldiers were dead.

The next year, the US Government sent out a retaliatory expedition to avenge the Grattan Massacre, and the Indian depredations that followed it. At the Battle of Blue Water (or Ash Hollow) on 3 September 1855, fought near Lewellen, Nebraska, 600 US infantry and dragoons attacked the Brule village, killing and capturing over half the 350 inhabitants.

The disaster at the Blue Water capped two years of mounting tensions between Lakota and Americans, and affected young Curly Hair greatly. Many of his Brule relatives had been killed or taken captive by the white soldiers. After the fight, Indian movement to the north of the North Platte River was prohibited, thus depriving the Lakota from entering their traditional hunting grounds. The Army let it be known to the Oglala chiefs that the US Government felt that

the tribe was responsible in part for the destruction of Grattan's command the year before by not stopping the murder of the routed soldiers by their Brule brothers. The government would be watching their future actions closely. Like many of his people, Curly Hair felt humiliated and fearful for the security of the Lakota nation, a nation unified by the sanctity of a clearly defined domain—the Black Hills. It was the key wintering ground for the Lakota and their buffalo, and held invaluable resources of timber, water and game. Its boundaries had to be aggressively held against all enemies—red man and white man.

Bulletproof medicine

The disaster at the Blue Water, and the competing notions of peace or war with the white man, as well as the normal turbulence of adolescence, drove Curly Hair to seek a resolution of these issues by begging the wakan for a vision of guidance that would clarify his future course and assure him of spiritual protection.

After undergoing the proscribed phrases of prayer and lectures, he mounted his pony and rode 50 miles down the North Platte valley where he fasted for four days and nights until the much sought after vision came to him. The details of Curly Hair's apparition are not known, but after his ordeal he claimed to have received the 'Holy

Message', one that assured him that the gods of his people (the Thunder Beings) would assist him as a warrior in the service of the Lakota.

Not long after, in May 1857, the young man proved that he was in fact blessed by the gods. A raid on a Pawnee village saw Curly Hair fight his first battle. During the contest, he led the way, counting coups against a number of the enemy. Counting coup was the supreme achievement of a Plains Indian warrior. The object was not to kill, but to strike a simple blow with the hand or a weapon, steal horses or engage in one-to-one clashes thus exhibiting one's skill at riding and showcasing his courage. After this fight, he was talked about by not only his own tribe but many others as a force to be reckoned with.

The summer of 1857 saw the 17-year-old Curly Hair, with a few of his Lakota friends, join forces with 300 young Cheyenne braves bent on opposing a column of soldiers under the command of Colonel Edwin V Sumner, as it made its way east along the South Platte River in north central Kansas. The Long Knives were returning from a failed mission to punish the Cheyenne for depredations committed along the Overland Trail.

On 29 July, Sumner's men came across the Indians who blocked their path home. The Cheyenne had performed ceremonies—'medicine'—which they believed would protect them from the white soldier's bullets. Unfortunately for the braves, Sumner unleashed a mounted saber charge that Indian medicine was not designed to counteract. Panic ensued among the Native Americans as they fled the field. During the following seven-mile pursuit by the troopers, 19 Indians were killed and wounded for a loss of 10 soldiers.

After the chase ended, Curly Hair and his Oglala comrades peeled off from their Cheyenne friends and headed the 200 miles north back to their village situated near Fort Laramie. They arrived there in late August.

The debacle at Solomon's Fork, compounded with the earlier defeat at the Blue Water, convinced Curly Hair that pitched battles with the whites was a losing proposition. He reasoned that the best course of action was one of hit-and-run raids and small-scale war of attrition using ambush tactics. Although he would continue to seek the personal protective edge offered by wotawe charms, he never forgot the farcical failure of the Cheyenne's use of bulletproof medicine and dissuaded others from relying on it.

The next six years saw the young fighter engaged in numerous battles against other Indian tribes in a constant quest to protect Oglala hunting grounds, secure plunder, and garner personal glory. Raids and counter raids took place in the latter part of 1857 against the Atsinas—northern kin of the Aprahos. During this struggle, Curly Hair laced in to the enemy where he rammed his horse in to the enemies' horses, knocking the riders off. After the fight, Curly Hair exhibited a flesh wound to the arm and two enemy scalps. His first major combat turned out to be a great personal success.

It was so stunning that his father soon after declared to the tribe that he was transferring his name and spiritual power to his son. The elder Crazy Horse would henceforth be called Worm. From then on, Curly Hair would be known by the name of his grandfather and father—Tasunke Witko, Crazy Horse. At the same time the young man took the hawk—the sign of swiftness and endurance—as his spiritual patron and

under him—the first of many luckless ponies he would lose over the next 19 years. While on foot and nursing his wound, he was charged by a mounted enemy who he brought down and killed. The next year, acting as a scout, as part of a retaliatory raid against the Crows, he participated in fighting on the Little Bighorn River that resulted in the retreat of the Crows north of that water as well as the Yellowstone River.

The victory allowed the Lakota to make the swathe of land between the Black Hills and the Little Bighorn Mountains their last great hunting grounds. After this, the area known as the Powder River country, with its high short grass plains watered by major rivers rising from the pine-clad flanks of the Little Bighorns, and filled with buffalo, elk and big horn sheep, became Crazy Horse's home.

The Battle Defending the Tents, fought in the Pryor Creek Valley of southern Montana in mid-summer 1863, revealed Crazy Horse's battlefield acumen. The young warrior mustered his braves in

Present-day Sioux chief wearing traditional clothing, including magnificent headdress. Crazy Horse wore plainer clothes to fight in. (Peter Newark's American Pictures/Pard Losee)



intermediary between him and the greater wakan powers. The career of the Lakota's greatest warrior had begun.

Crazy Horse's home

In May 1858, the newly named Crazy Horse joined an Oglala war party against the Crows. He sustained a wound to his left calf. His horse was then shot from

battle order and repeatedly led them in charge and counter charge against an enemy who showed considerable discipline and firepower. He conducted the contest with courage and forethought and eschewed recklessness while trying to instill those battlefield traits on his comrades. According to one of his followers at the battle that day, 'He

always tried to kill as many as possible of the enemy without losing his own men.'

When Crazy Horse led a war party, his followers felt confident in their success and safety. If he felt unsure of a coming fight, he would call it off. 'He didn't like to start a battle unless he had it all planned out in his head and knew he was going to win. He always used judgment and played safe,' said one follower. His habit of dismounting to fire his rifle, to be sure he hit what he aimed at, was unusual for an Indian, and showed that he carefully deliberated every phase of a battle he conducted.

By his early 20s, Crazy Horse had acquired the stature, physical appearance and mannerisms that would characterize

him for the rest of his life. Standing 5' 8" tall he was of medium height for a Lakota male. He body was slender, some said slight, and wiry. He wore his hair waist-length, plaited in two braids. Like his hair, his skin was much lighter than other Indians. His face was very narrow with a small finely shaped and aquiline nose. His eyes, according to one white observer, were large and hazel color and marked by 'a sidelong glance. He never looked straight at a man.' To many, his general demeanor was one of 'unusual dignity'.

He dressed plainly, never wore a war-bonnet, and restricted his war paint to hailstones and lighting streak. Except for a breechcloth and moccasins, most of the time he fought naked.

Many of his fellow tribesmen remembered him as taciturn, rarely excitable, quiet and reasonably sociable, except when leading a war party. His hallmarks were self-reliance and solitariness, which allowed him to excel as hunter, warrior and scout—the three emblematic roles for a young Lakota brave.

The years 1860 through 1865 were spent by Crazy Horse and his people hunting buffalo and warding off enemy incursions on their lands, especially from the Crows. Crazy Horse perfected his 'medicine' during this time. According to a close friend, Horn Chips, 'He seemed to bear a charmed life, and no matter how near he got to his enemy they could not hit him.' This was true, for he was never wounded again in battle. Although confident of his medicine, Crazy Horse always feared that if his arms were held by another he would be vulnerable to a knife.

Fighting the White Man

By 1863, the new avenue to the western Montana gold diggings, the Bozeman Trail, a route leading north from the North Platte to the valley of the upper Yellowstone had been blazed by white settlers and miners, but it crossed the rich hunting grounds of the Lakota in the Powder River country. The result would see the uneasy peace on the northern plains between the Indians and whites collapse as the Lakota combined to oppose this new American advance. Crazy Horse would play a significant part in the war to come.

Urged on to fight the white man's latest incursion on to their lands by the most prominent Oglala war chief of the time, Chief Red Cloud, Crazy Horse joined the growing Indian coalition. From April to June 1864, small raiding parties led by Crazy Horse and others laced across the North Platt, striking at trading posts, ranches, settler traffic and militia garrisons. The winter months of 1864-64 saw a halt to the fighting, but the tempo of the conflict was quickened in May 1865, as war parties raced south to threaten the Bozeman Trail from Fort Laramie west to the Sweetwater, tearing up telegraph lines, driving off stock, and out fighting the tiny army detachments sent to pursue them.

The Indian raids on the Plains during the middle years of the 1860s, referred to as the Bozeman Trail War, or Red Cloud's War, turned from excursions for recreation and profit to those of revenge as white settlers and soldiers executed Indians who fell in to their hands, regardless of the latter's complicity in



No authenticated photograph has been taken of Crazy Horse, but this one, taken by SJ Morrow, is generally believed to be of him. (Peter Newark's American Pictures)



Plains Indian warriors use hit-and-run tactics to attack a wagon train. Crazy Horse preferred these tactics to set battles that he could never win against the US army. Painting by Frederic Remington. (Peter Newark's American Pictures)

Indian raids. As a result, Crazy Horse grew to hate the Americans more and more and was determined to exact his own revenge on them.

During this time, the United States Army tried to corner and destroy the Indian warriors who tormented them with incessant surprise strikes and damaging depredations. The results were always the same: laborious military columns converging on once occupied Indian sites, long before vacated, fruitless pursuits and mounting army casualties with little or no results to show for them.

The failure of the US government's military efforts was driven home, again by the actions of Crazy Horse, with the Fetterman Massacre on 21 December 1866. After putting in motion a decoy raid on an army detail gathering wood near Fort Phil Kearney, close to modern day Buffalo, Wyoming, 81 soldiers and civilian volunteers under Captain William J Fetterman left the post in response. Fetterman's party was lured away from the fort and ambushed by over a 1,000 Lakota, Cheyenne and Arapaho braves in a perfectly executed plan—and killed to a man. It was the worse US military defeat by Native Americans up to that time. Oral tradition states that Crazy Horse led the decisive charge that finally overwhelmed the last white defenders.

Modern weapons

The year of 1867 saw more Indian raids and ineffectual attempts by the military to prevent or punish them. If the Army had learned nothing from the conflict so far, the same cannot be said of Crazy Horse. Defeated at the Wagon Box Fight on 2 August, near present day Story, Wyoming, the wily Indian warrior realized that his men were out-gunned by the white soldiers. The year before, at the Fetterman Massacre, less than 10% of his braves were equipped with firearms. After the Wagon Box Fight, he would do all he could to arm his followers with modern armament. By the Sioux War of 1876, one-in-ten of his men were armed with repeating rifles—himself owning at least three 1873 Winchester repeaters by that date.

On a tactical level the battle of 2 August 1867 convinced Crazy Horse that set piece actions against a foe with superior firepower and in defensive positions were doomed to fail. His instincts told him that the only viable war for his people to wage lay in open order tactics and the rapid deployment of fast moving horsemen against a moving opponent over open terrain. In a mobile fight, the riding skills of mounted warriors against a stressed and strung-out enemy would allow the latter to be beat piecemeal.

The incessant actions of men like Red Cloud and Crazy Horse bore fruit for by

the summer of 1868 the United States government signed the Medicine Lodge Treaty with the Plains Indians. It closed the Bozeman Trail as well as abandoning its guardian forts. An uneasy peace with the whites had begun.

The year 1870 saw more warfare between the Lakota and their arch foe the Crow with Crazy Horse's full participation. In the midst of intertribal warfare, Crazy Horse, in an arranged marriage, found time to finally join with a Lakota woman named Black Shawl that same year. A baby girl was born to the couple and was named They Are Afraid of Her. Unfortunately, the little girl died of an unknown illness in late 1873.

More conflict followed with the Crows and a run in with the United States Army. In July 1873, a survey expedition for the Northern Pacific Railroad was operating on the Yellowstone River. Escorted in part by the US 7th Cavalry, under the command of Lieutenant Colonel George Armstrong Custer, Crazy Horse, now an acknowledged war chief, skirmished with the Long Knives at Tongue River, Montana, on 4 August, and Bighorn, Montana, 11 August. Few losses resulted on either side, but officers of the 7th noted with surprise and admiration that in both actions the Indians maintained 'a perfect skirmish line throughout' and exercised 'a very extraordinary control and discipline'.



Sioux Indian camp, painted by Arthur A Jansson. (Peter Newark's American Pictures)

The soldiers commented on the Indians' firepower as well—rapid shooting Henry and Winchester repeaters being in evidence. This was indeed the case. Since early 1873, Crazy Horse had used all means to procure such weapons for his men. By 1876, over one-fifth of Lakota warriors owned a repeating firearm, while over 50% of them employed some type of rifle. Custer's troopers were the first to confront this more formidable foe, well armed, well led, and determined to defend their land to the utmost.

Last battles

In 1874, the Lakota were being squeezed more and more by white trespasses on their land. The Indians reacted with force. A large civilian mining expedition was attacked by Crazy Horse and Sitting Bull in April near the Little Bighorn River, but was repulsed by the superior firepower of the enemy. Two more serious incursions were mounted during the summer, both sanctioned by Major General Philip H Sheridan, head of the Military Department of the Missouri. The first under Captain AE Bates, 2nd US Cavalry Regiment, killed 20 Indians in a fight in the southern Bighorn Mountains. The second was a reconnaissance to the

Black Hills of Dakota Territory by Custer seeking to verify reports of amazing wealth to be had there. This second provocation was the more egregious since the Black Hills was the acknowledged holy grounds of the Lakota.

Late 1875 saw the Grant administration in Washington decide to seize the Black Hills for the United States. The army launched its campaign to achieve this on 17 March 1876 with an attack on the Indians in the Power River Valley. The Great Sioux War had begun.

In late May of that year, Sheridan set in motion two army columns designed to trap the Indians in the Black Hills and bring them to submission. He sent out General George Crook with about 1,300 men from Fort Fetterman. He was to hammer the enemy on the anvil of another force, that of General Alfred H Terry and Colonel John Gibbon, coming from the Yellowstone.

Following the progress of Crook's men, Crazy Horse was determined to prevent the junction of the former with Terry's column. On 17 June, when a planned ambush near Rosebud Creek, Decker, Montana, misfired, the Indians attacked. Mounted charges by both sides, as well as fighting on foot among the hills, lasted for

six long hours between about 800 Native American warriors and the blue coats. Hand-to-hand fighting, both on foot and from horseback, erupted at points along the two-mile battle line, while for a time part of the army's front was isolated and in danger of being overrun.

A flanking move by Captain Anson Mills forced Crazy Horse to signal an orderly withdrawal. Crook lost ten killed and 30 wounded while Crazy Horse admitted a loss of 36 killed and 63 wounded. Although the Army proclaimed a great victory, it was in fact a draw at best. The battle would seal the fate of Custer and his 7th Cavalry eight days later at the Little Bighorn by preventing the timely junction of the Rosebud force and the 7th Cavalry.

Little Bighorn

At about 4.35 pm, Crazy Horse had reached the lower end of the Indian village on the Little Bighorn River. He witnessed swarms of warriors crossing it heading for what proved to be George A Custer's five-company battalion of 210 troopers descending from the eastern ridges north of the water course. He determined to cross the river at a ford about a mile and a quarter north of the



Red Cloud, Oglala chief and rival to Crazy Horse.
(Peter Newark's American Pictures)

village and attack the blue coats pressing them against the Indian forces already closing on the enemy from the south.

Leading his braves on his pinto pony, Crazy Horse passed the river and sped up a ravine. Spotting the enemy on what was to be called Calhoun Ridge, he dismounted and started firing his Winchester repeater at the soldiers. The final phase of the battle of Little Bighorn had begun.

Meanwhile the soldiers under Custer, seeing the number of Indians descending on them, were ordered to dismount and prepare to fight on foot after moving beneath the ridge's crest. For the next hour, Crazy Horse ordered a succession of infiltration tactics alternated by sweeping charges, while all the time keeping up a brisk curtain of sniper fire. Sudden Indian forward rushes were followed by just as quick retreats when the soldier's fire became too heavy. As he pressed his attack on the enemy's right, other warriors keep the pressure up on

his left and center.

Soon the blue coats of Company L holding the right on Calhoun Ridge were overwhelmed by fire and charging Indians, and the entire army line started to unravel with troopers fleeing toward what would be later called Custer's Last Stand Hill. Seeing his chance, Crazy Horse led a mounted charge straight through the enemy position cutting it in two.

As dusk approached, the several knots of remaining defending soldiers were overcome. Crazy Horse by this time was on Last Stand Hill dispatching the remaining soldiers with his war club.

That evening, and for part of the next day, the Indians besieged the remnants of the 7th Cavalry under Reno and Frederick Benteen holed up on Reno's Hill. Reports of the approach of Terry and Gibbon's troops forced the Indians to retreat. Crazy Horse organized a reconnaissance party to monitor the approaching soldiers' movements as well as a force to cover the Lakota

withdrawal to the Powder River country.

For the rest of the year, Crazy Horse moved his people away from the pursuing US Army detachments under Terry and Colonel Nelson A Miles. To dissuade further pursuit, Crazy Horse, with 500 warriors, attacked Miles at Wolf Mountain, near Birney, Montana, on 8 January 1877. The battle took few lives since the contenders maneuvered more than they fought. A blizzard brought the combat to an end.

As the year progressed, defections increased, leaving Crazy Horse and his followers weaker in numbers and supplies. More and more of his Lakota and Cheyenne allies were surrendering to United States authorities and promising to remove themselves to designated Indian reservations. Then on 10 April 1877, Crazy Horse, after rejecting a plan for him and his people to flee to Canada, accepted the terms which would place him and his 900 people on the Red Cloud and Spotted Tail Agency located in Nebraska Territory.

Betrayal

Within four months of their arrival at the Red Cloud and Spotted Tail Agency, the US authorities had taken away the horses, guns and hope of Crazy Horse and his people. Crazy Horse blamed himself for their plight and the fact he could do nothing about it.

Fueled by rumours spread by Indian leaders, such as Red Cloud, who came to be jealous of Crazy Horse, on 6 September 1877, he was arrested on the false charges of inciting his followers to desert the agency and go back on the war path, as well as planning to kill General Crook. While on his way to speak to the commander at Camp Robinson, located near the agency, Crazy Horse was apprehended by a group of Indian leaders who tried to put him in irons. Reacting to the threat, he took out a knife he was carrying and slashed the arm of one of his would be captors. Immediately, an Indian Army Scout advanced on Crazy Horse and stabbed him with a bayonet in the side and back while other Indians held his arms—just as he had feared so many years before.

Ignoring his protests, the men who had attacked him laid Crazy Horse on a cot. His father soon arrived and witnessed his son's last words: 'Tell the people they should not depend on me any longer.' With that utterance, Crazy Horse died. The journey of perhaps the greatest Indian warrior in American history had come to an end •



Berber lancer and Arab archer clash on a raid into central France with a Frankish warrior, early 8th century. Painting by Angus McBride.

Halting the Conquering Arabs

Led by their prophet and warlord—Muhammad—the Arabs rapidly took apart ancient empires from Persia to Byzantium. RICHARD BULL reveals the truth behind their extraordinary conquests and what happened when they clashed with the Franks.

In a cave in the mountains of western Arabia, a man received messages from God. Within 20 years of announcing these visions, Arabia had been converted to a new religion and united under this one man. Within 50 years, his successors conquered Palestine, Syria, Mesopotamia, Egypt, Persia and Afghanistan. The Persian Sasanid Empire was annihilated and the Byzantine Empire left with only one oriental province in Asia Minor. Within 100 years of that lonely mystical experience, the followers of the Messenger of God ruled a domain that stretched from India to Spain and

from the Sahara to southern France and Central Asia. In a remarkably brief period, Arabs held sway over lands on three continents: an area vaster than that controlled by the Romans at the height of their Empire. The Messenger of God was Muhammad and his religion — Islam.

Year One

For centuries before their surrender to Islam, the nomadic tribes of Arabia were considered of little importance. To the Roman and Persian empires, the wild Arabs of the interior were vagabonds whose raids were ineffectual pin-pricks:

nothing to worry about. Occasionally the tribes fought for Imperial forces but always they disappeared back into the desert. In the 6th century, it was the Moors, the native inhabitants of Mauretania—the western regions of north Africa—who proved the most dangerous of the southern Barbarians, but even they were dismissed by the Byzantines as the most poorly armed Barbarians the Empire had to fight. Solomon, commander of Byzantine forces in north Africa after Belisarius, described the Moors thus, ‘Most of them have no armour at all. Those that have

shields, have only small, poorly made ones which are not able to turn aside thrusts against them. They carry only two short spears and once they throw these, if they achieve nothing, they turn around and run.' Solomon underrated the Moors at his own cost. Later they ambushed him and he was killed.

The Roman and Persian empires had never bothered to conquer the whole of the Arabian peninsula. In the interior, deserts and arid mountains encouraged a nomadic pastoral existence. Arabia's only source of wealth and appeal to outsiders was its many trade routes, which crossed the land from the south and the Indian Ocean. Caravans laden with aromatic and exotic goods advanced from oasis to oasis along the Red Sea coast. Around these fertile pools thrived market towns that grew fat on the trade that passed through them. Frequently, neighbouring towns competed violently with each other to ensure that caravans paused with them rather than their

rivals. In a battle to secure their monopoly over the middle stretch of the Incense Route, the merchants of Mecca defeated the people of Ta'if, a few miles to their east.

By the beginning of the 7th century, Mecca was a major commercial centre, deriving its great wealth almost exclusively from the caravan trade. To ensure its continued prosperity, Bedouin nomads from the interior were employed as guards and guides for the myriad trains of camels that passed to and fro. Occasionally, and more as a sport and demonstration of masculine prowess, Arab townsmen would engage in raids — called *razzias* — on neighbouring communities. The intention was to avoid bloody confrontation and simply rustle a few animals from their rivals.

It was into this world of high materialism that Muhammad, a man of middling status and wealth, was born. By 610, in his late middle age, he began to preach to the citizens of Mecca about his mystical experiences. These revelations became the essential tenets of the Koran and Islam, an offshoot of the Jewish and Christian religions. Muhammad preached that God—Allah—is almighty and that he alone should be worshipped. After a period of toleration, the Jews were accused of corrupting the scriptures, while the Christians were criticised for worshipping Jesus as the Son of God. Muhammad was only a prophet—a messenger—he was not of supernatural origin.

In addition to this basic faith in one God, Muhammad taught that God

expected his people to be generous with their wealth, to help those less fortunate than themselves. In return, those people that led a virtuous life would, on the Day of Judgement, pass in to heaven, while those who had not, would be consigned to hell. Such a blatantly anti-materialist philosophy naturally excited the poor of Mecca and annoyed the ruling merchants. Irritation turned to outright hostility and in 622, Muhammad and his Muslim followers fled to Medina, the next important trade centre, 200 miles to the north of Mecca. It is from this date that Islamic history begins — year one.

Victory of faith

Instead of settling down to a life of meditation and preaching in Medina, Muhammad at once began organising raids against Meccan caravans.

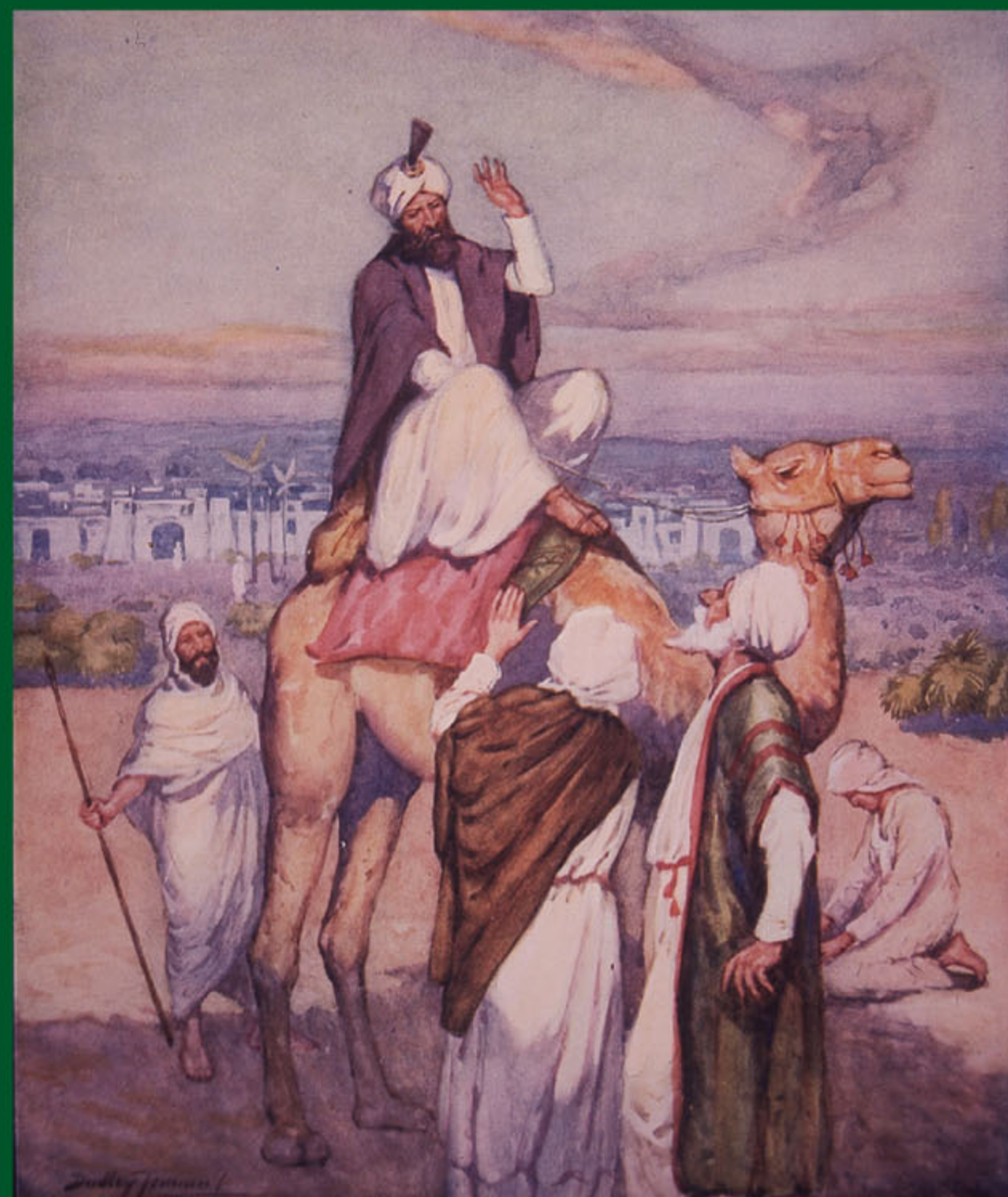
Ostensibly to gain his impoverished followers a living in a new town, it seems likely that Muhammad also used these raids as a method of building up his power and respect in Medina, and amongst the western Arabs. For without an income and strength of arms, Muhammad's religion might have disappeared in the wake of other self-proclaimed prophets and their sects.

After a slow start, Muhammad's raiders gained some successes and other Arabs converted to Islam and joined his horde. Despite misgivings and hostility from many of Medina's inhabitants, the activities of the Muslims inevitably embroiled that town in a war against Mecca. The first battle evolved from an unsuccessful *razzia*. In 624, 300 Muslims beat off 900 Meccans. The conflict had started with a few single combats and ended with less than 100 dead on both sides. The battle of Badr was the first notable victory of the Muslim forces, and was interpreted as a victory of faith over the unbelievers.

Within Medina, Muhammad consolidated his political position.

Leading opponents were assassinated. Jews were expelled and massacred. Two Meccan attacks on Medina were repulsed and in 630, after Muhammad had assembled an unusually large force which overawed the city, the Muslims entered Mecca peacefully. Over the next years, Muhammad defeated rival tribes and towns, emerging as the most powerful man in Arabia. Undeclared tribes rallied to his side as allies. As Muhammad's strength grew, these tribes converted to Islam. Only those Arabs to the north, nearest to the Byzantine and Persian empires, remained aloof from the new enthusiasm that had seized their neighbours. A couple of years before his death in 632, Muhammad led an expeditionary force, said to be 30,000 strong, along the trade route to Iraq. It foreshadowed conquests beyond Arabia.

The Muslim forces that achieved the



Muhammad, founder of Islam, flees from Mecca to Medina in 622—Year One of the Islamic era.

first victories of Islam were small and unprofessional. Essentially they were raiders, used to attacking caravans and not prepared armies. Muhammad's supporters were towns-men from Mecca and Medina, with Bedouin recruited from the interior.

Many were motivated by the prospect of booty, some by the desire of their leader to spread the new religion. The raiders and Bedouin rode horses. In large-scale confrontations, however, the majority of Muslim townsmen went into battle on foot. Camels were used mainly as pack

animals, although warriors sometimes rode them into battle but then dismounted. They do not appear to have been used in tactical formations like those of the Moors and rarely did warriors fight from camel back. When battle was engaged, camels were usually left behind in camp where they were hobbled to prevent them from being easily rustled away by enemy raiders. The number of horses available to the Muslims was very small at first, but this grew with every victory.

Slave warriors

Alongside the more prosperous Muslims fought their slaves. Inspired by the egalitarianism of Islam, these slaves fought particularly well. According to tradition, the first Muslim killed in battle was a black slave called Mihja. Another slave, a Persian, was credited with suggesting the digging of a ditch around Medina that saved the town from the Meccans. But aside from the promise of their new faith, slaves fought effectively in battle for other reasons. On the positive side, success in combat could bring a slave renown, promotion, favours, perhaps even liberty if he saved his master's life. On one occasion, later in the 7th century, a commander urged his massed levies of slaves onwards with the words, 'The slave who fights is free.'

So encouraged, observers were astonished at the vigour of the slaves as they gained victory. Fighting also gave a slave the opportunity to prove himself a man of worth in his own right. On the negative side, fear of defeat and death, as well as fear of punishment if they did not fight well, instilled many slaves with greater martial energy. Such considerations seem to have overcome any doubts that their masters may have had in arming a potentially hostile group of men. Besides, at the beginning of their struggle for survival, Muhammad and his followers were desperate for any able-bodied recruits. Their slaves, particularly the physically strong agricultural workers, could often endure the harsh conditions of campaign better than their town-bred masters.

Some slaves rose to prominence through their efforts in battle. Wahshi was a black Ethiopian highly skilled at spear throwing. At first he was employed by his master, an opponent of Muhammad, to kill the Prophet's uncle. This he achieved in battle and thus obtained his liberty. When Mecca was taken by the Muslims, Wahshi fled to Ta'if. There, he fell in with a group of citizens who converted to Islam. He attempted to obtain forgiveness from



Armoured Muslim cavalry, having adopted the armour and weaponry of Iranian and Turkic warriors, from a later period.

Muhammad but was dismissed. He turned to drink and was conspicuous for wearing bright red clothes.

At the battle of Yamama, the Ethiopian seized a chance to redeem himself. Fighting with the Muslims, he charged fearlessly towards the enemy commander and struck him dead, thus saving Islam from its chief 'false prophet'. 'I killed the best of men after Muhammad,' Wahshi claimed in later life, 'and then the worst of them.' Eventually, his drinking killed him. Such slave warriors were not pro-fessional soldiers in the sense of the military slaves acquired and trained by Muslim dynasties, like the Egyptian Mamluks, in later centuries. The systematic raising of elite corps of professional slave warriors did not become institutionalised until the 9th century. Until that time slaves only

fought as occasional retainers, defending their masters in battle, much like medieval European serfs. The best that could be said of them was encapsulated by an Arabic poet thus: 'One obedient slave is better/ than three hundred sons./ For the latter desire their father's death,/ the former his master's glory.'

War of the caliphs

The death of the Prophet could well have been the end of Islam had not a string of remarkably strong and determined men taken over leadership of the religion and the Arabs. These leading disciples of Muhammad were known as caliphs. Not surprisingly, the main task the first caliph, Abu Bakr, had to face on his succession was to maintain the unity of the Arabs. Encouraged by the success

of Muhammad, 'false prophets' sprung up throughout the country. By calling themselves 'prophets', these men hoped to detach themselves from the relentless inter-tribal suspicions and rivalries that had dogged previous attempts at greater centralisation of power. A spiritual man was seen to be above politics, unaligned to any faction, therefore only he could be a truly unbiased ruler of several tribes. Whether this had lain intentionally behind Muhammad's rise to power is uncertain, but it was a fundamental factor in his triumph.

The elimination of competition by Caliph Abu Bakr in the war of the Ridda established more potently than ever before the Arabs as a single force. Under the reign of the Caliph 'Umar, this energy was directed against foreign non-Muslims. With the invasion of Mesopotamia, Palestine and Syria, the Jihad—or Holy War—was carried onto alien territory. Internal peace and external conquest profoundly transformed the Arabs. From an array of feuding tribes they had become a nation, a major Mediterranean power.

Much has been made of the belief that it was the strength of their faith that brought the Muslims so many spectacular victories. Certainly, today in the Middle East, the militancy of fundamentalist Muslim groups causes their more liberal neighbours to shudder as they witness the willingness of the hardliners to die for their beliefs. It can be argued, however, that such religious zeal has the authority of over a thousand years of established worship: and is frequently associated with fervent nationalism. The religion of the first caliphs was only a few decades old and must still have been widely misinterpreted and confused with other monotheistic faiths in the region. Such a newcomer to the philosophies of the Middle East would not have had the weight of tradition needed to impress many Arabs.

That said, the doctrines of Jihad did promise a place in heaven to any warrior who died for Islam. This paradise was conceived as a wonderful garden running with cool streams. For a desert nomad, vulnerable to the superstitions and visions of afterlife that enveloped most people at this time, such a heaven was highly attractive. Warriors thus fearless of death would indeed have made an invincible force. And yet the West had its own spiritual promise for faithful warriors. Christianity offered its defenders an equally comfort-ing afterlife. Even those Germans still motivated by pagan beliefs knew that to die fighting meant ascension

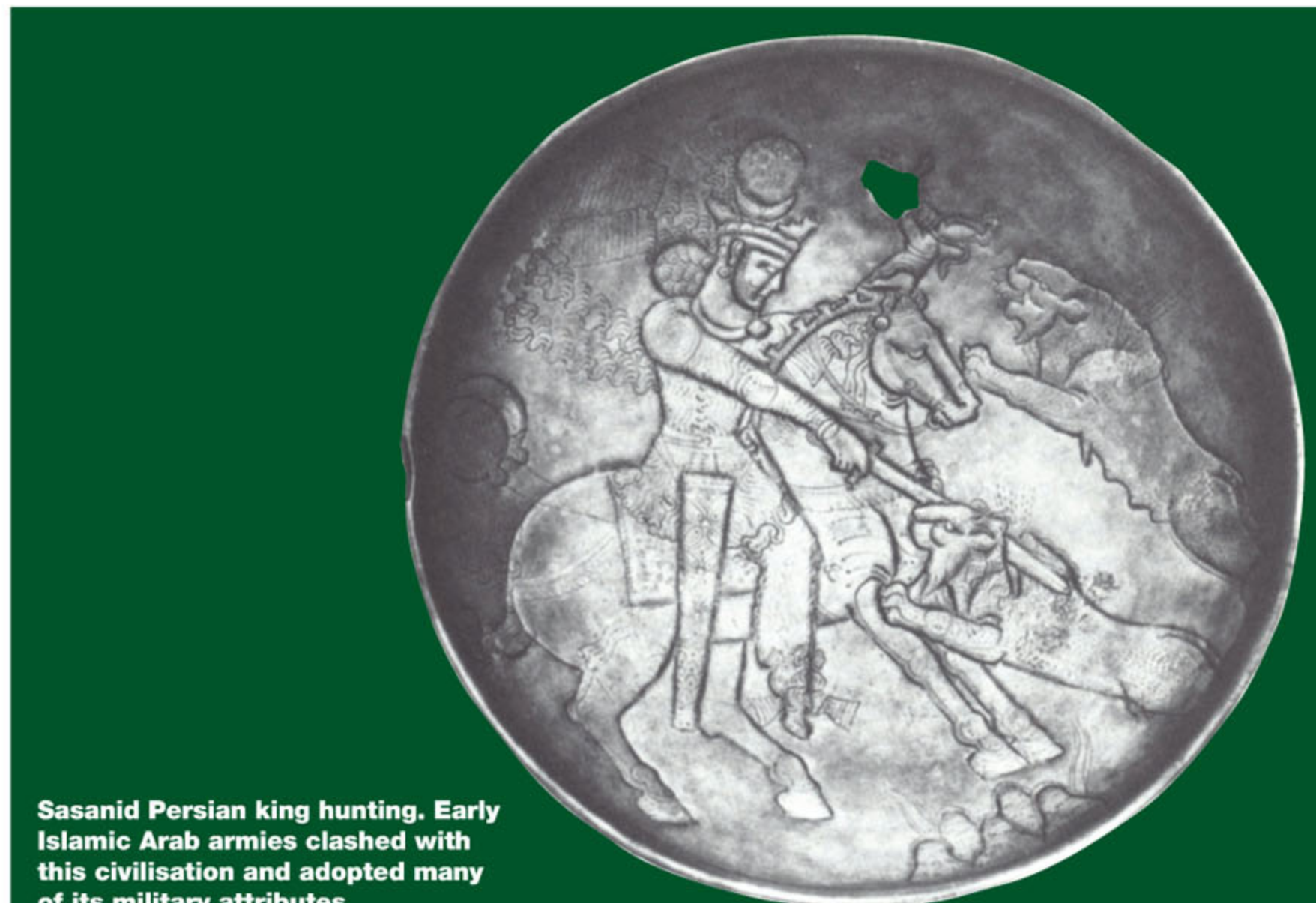
to the glorious halls of their War Gods. But it was only the most religion-obsessed minds on all sides that truly believed such images: only a core of warrior mystics. The majority of men knew it was better to survive than be killed. Such commonsense cannot have been any less prevalent among rank and file Muslims.

Both Islam and Christianity preached the basic tenet that it was wrong to kill a man, but made an exception when that man was an infidel and opposed to one's own religion. The Jihad had its parallel in Christianity with the just wars condoned by Saint Augustine, and the crusades of later centuries. Yet Islam is still regarded as a stronger motivating force than the faith of the Byzantines or the Franks. This cannot be true, and is largely the result of Western cynicism regarding a belief close to hand, while maintaining a certain respect for a

announced, 'May God keep you safe and bring you much booty.' Amr rejoined, 'I did not become a Muslim for the sake of wealth, but for the sake of submission to God.' To which the Prophet concluded, 'Honest wealth is good for an honest man.'

Finest horses of the East

In Christian Europe, the doctrine of chivalry evolved to curb the excesses of war. Similarly, the Jihad incorporated a code of military conduct. But unlike chivalry, which was an unwritten code emerging from a general Christian aristocratic regard for honourable decency, the rules of Jihad were actually inscribed in works on Islamic law. The killing of women, children and old men was forbidden, unless they fought against Muslims. The wanton destruction of crops was discouraged. Prisoners converted to Islam were not to be killed.



Sasanid Persian king hunting. Early Islamic Arab armies clashed with this civilisation and adopted many of its military attributes.

mysterious system of faith.

The primary motivating force among the majority of Arab warriors was the same as that which stimulated medieval crusaders and has always excited soldiers—the prospect of booty and the licensing of outrageous behaviour.

The success of the early Muslims simply encouraged many more Arabs to clamber on the wagon of ruthless enterprise. It was a campaign of conquest that made nomads rich beyond their own meagre farming and transformed merchants into dynastic imperial governors. That solid material ambition underpinned much of the Muslim conquest is revealed even by Muh-ammad. When the Prophet placed Amr ibn al-As, the future conqueror of Egypt, in command of some warriors, he

Other prisoners should not be tortured to death or mutilated, although they could be executed. Grants of safe-conduct and quarter must be upheld. Similarly, peace treaties and armistice agreements could be entered into with non-Muslims. Before war was embarked upon, a summons to Islam must have been issued to the enemy state. Like the vague humanity of chivalry, such a code was frequently broken in the heat of battle. In addition, there were so many differing interpretations of Islamic law that outright contradictions of many of the above measures were justified by a variety of sects.

For centuries, the Sasanid Persian Empire had been the Roman Empire's principal Eastern enemy. In the early 7th



Arab hunter portrayed on a Syrian fresco of the early 8th century. He uses a composite bow and rides with stirrups.



Arab army composed of foot soldiers, armed with spears and swords, and cavalry. Spanish illustration of early 10th century.

century, both forces were exhausted and recovering from their costly conflicts. On top of this, the Sasanid dynasty was politically unsteady and vulnerable to a sudden, unexpectedly powerful thrust from the south. But the Persians were no easy target. Indeed, in their initial contact with the Muslims they severely defeated the invaders. The reluctance of the Arabs to give up the struggle triumphed, however, and in the end they captured a series of ancient capitals. The Barbaric behaviour of the victorious nomads shocked the more refined Persians. The Arabs tore up priceless carpets studded with jewels and shared them among each other. Dogs were fed off gold platters and luxurious aromatic substances were mistaken for food spices and tipped into soups.

As the Persian Empire quickly crumbled, Arab forces launched attacks on Byzantine Palestine and Syria. With a sandstorm blowing in their enemy's faces, the Muslims tore apart a Byzantine army at the second battle of Yarmuk. Aided by the passivity of the native population, the Arabs soon dominated both provinces. In 638, Muslims occupied Jerusalem. A year later, they invaded Egypt and threw out the Byzantines. This was particularly galling for the Empire as it

had just expended a great deal of effort in recapturing the land from the Persians.

From their campaigns against the Persians and the Byzantines, the Arabs gained much. Their primitive warfare of enthusiasm aided by fortune was transformed into a more sophisticated system of war through acquisition and adaptation. Horses had been rare amongst the Muslims before they left Arabia, but as they conquered the lands of the Persian and Byzantine empires, they acquired the finest horses of the East. The Syrian-Arab crossbreed combined weight with strength and became a vital weapon in further Islamic expansion. So much so did the Arabs take to horses that the small force of 4,000 that invaded Egypt in 639 was almost exclusively made up of horse-warriors. Among these riders the stirrup was known but was largely disdained as a sign of weakness. Only later did it become a generally accepted device. Camels and mules were still ridden while on the march to save the horses for battle.

In Arabia, the Muslims had also been poor in arms and armour. From the Byzantines and Persians, the Arabs looted mail and scale armour and witnessed the effective use of heavy cavalry so protected. Arab nobles were greatly impressed by their Sasanid counterparts clad entirely in iron. Veils of mail covering their faces gave them a dramatic appearance; while strips of iron were fastened on to their mail shirts around their torso; and yet more mail or scale armour protected their horses.

The Roman Ammianus referred to earlier warriors so encased as looking 'not like men, but statues polished by the hand of Praxiteles'. Perhaps, however, leading Muslims rejected such a display as decadent. Chroniclers commented on the victorious entry of the Muslims into their cities as impressively unshowy compared to the Byzantines or Persians. This may have been because the majority of Arabs wore their mail shirts between layers of clothing: similarly, helmets were swathed in turbans. In the case of mail, covering it with linen may have been intended to deflect the direct rays of the sun, to prevent it from heating the bare metal to an unbearable condition.

Of course, not all Muslim warriors wore armour. Frequent injections of poor nomadic tribesmen meant that there were always a great many lightly clad horsemen in all Muslim armies. This contributed to the preference of many Muslim commanders for campaigns that were a series of raids rather than pitched battles. That said, there does appear to

have been a strong strain of Germanic-like chivalry in Arab warfare—a need for direct confrontation. For though the Arabs employed the composite bow as a matter of necessity, particularly when fighting against Central Asian Turks, the horse-archer did not play an overwhelming role in early Muslim warfare. Foot archers were employed to great effect but much mounted fighting was still carried out with sword and spear.

Single combat was favoured and many battles were decided by hand-to-hand fighting. In the civil wars of 657, a duel between two Arab champions was recorded. Both Abbas ibn Rabiah and Irar ibn Adham dismounted to confront each other. The warriors wore coats of mail. Abbas' mail covered his head and was so long — being intended for horseback — that he had to tuck part of it into his belt. In fact, so completely protected were they by their mail that their sword blows proved fruitless. Becoming tired and desperate, Abbas suddenly noticed a gap in Irar's armour. He tore this aside with one hand and then plunged his sword into his opponent's naked chest. Irar fell dying.

In later centuries, heavily armoured horse-archers became the regular core of most Arab armies. The early 10th century chronicler al-Tabari lists the following essential arms and armour for a warrior: mail, breastplate, helmet, leg-guards, arm-guards, horse armour, lance, small shield, sword, mace, battle-axe, quiver of 30 arrows, bowcase with two bows and two spare bow strings. Such a 'tank' was clearly descended from the Byzantine and Sasanid *clibanarii*, so named after the Greek word for 'oven'—obviously how many a soldier felt in the heat of battle.

Fighting the Visigoths

Inevitably, the continued success of the Muslims brought great strains to their unity. Civil war broke out and for a few decades their conquests faltered. By the beginning of the 8th century, however, the whole of north Africa had fallen to the Muslims. Like other warriors before them, the temptation to cross a strip of sea just 18 miles wide and pass from continent to continent proved overwhelming. In the town of Ceuta, opposite Gibraltar, they found themselves an ally. Count Julian, perhaps a Byzantine exiled from Spain or a disaffected Visigoth, demonstrated how easy it was to tap the wealth of Romano-Goth Iberia. Accompanied by Muslims, his men raided the southern-most tip of the peninsula. Thus encouraged, a year later in 711, a force of 7,000 warriors



Charles Martel—the Hammer—smashes an Arab force near Tours in 732 and halts Islamic expansion in Europe.

commanded by a Berber called Tariq, set sail in ships provided by Count Julian. For ever after, their landing place has been called Gibraltar, Jabel Tariq, ‘the mountain of Tariq’. The army consisted mostly of Berbers, nomads of the Sahara who had converted to Islam and provided some of the fiercest warriors of the Arab invasions.

Racked by conflicts over succession, the Visigoth kingdom of Spain was unable to field a united front. After the Muslims had established themselves and received reinforcements, they were finally confronted by the Visigoth King Roderick, somewhere north of the salt-lake of Janda. The Berbers had rustled many horses from local farms and so met the Iberian Germans on horseback. Both sides fought with swords and spears. Gangs of noble horse-warriors were supported by bands of foot-soldiers. The Berbers were veteran warriors of the Muslim African

campaigns and fared well against the reluctant farmers and serfs desperately assembled as an army by Goth landlords. Roderick had already suffered from crippling desertions on his way south from Toledo. And now, as the Berbers charged forward, swathed in mail and dark blue face-covering turbans, the Visigoth ranks shuddered and broke. Roderick and his retainers were killed.

The Muslim advance towards the Visigoth capital of Toledo in central Spain was rapid. The Jewish and Byzantine inhabitants of the region made no pretence of resistance. They had suffered much under the oppressive regime of the Goths and were happy to exchange it for the less intolerant rule of Islam. Indeed, the Jews, with north African allies, had organised an abortive revolt against the Visigoths in the last years of the previous century and savage massacres of the Jews had followed.

Local Visigoth warlords did, of course, oppose the invaders but there was no central co-ordination and their unity had long been shattered by dynastic rivalry.

Some Goths even helped the Arabs in the hope of future political preferment. The Visigoth kingdom was spent, and in the face of a determined invader, it fell apart. Over the next few years, many more Arab warriors arrived and key cities were subdued. As with previous Barbarian invasions, not every community in a country as vast as Spain could be said to be under direct Arab control, but by 716 the conquest was complete and al-Andalus, or Andalusia, emerged as the first European province of the Muslim Empire.

Throughout their conquests, the Muslims were aided by the internal exhaustion and collapse of their chief adversaries. The Sasanids, Byzantines and Visigoths were all caught at their least dynamic. With the Muslim invasion



Arab warrior and Ethiopian slave take on a Sasanid Persian armoured horseman or clibanarius, early 7th century. Painting by Angus McBride.

of southern France, however, they came against a far more vigorous opponent, though this was not immediately apparent. For on the surface, if the inhabitants of France had depended on their royal family to protect them, there would be Islamic palaces in Aquitaine the equal of the Alhambra. The Merovingian dynasty of Franks had kept a firm grip on the lands of Gaul for two centuries but was now in decline. Real power was held by men behind the throne—the Mayors of the Palace. This role, of defender and maintainer of the state, was assumed by the Arnulfing dynasty and was handed from father

to son. From this family emerged the Carolingian monarchs.

Charles the Hammer

At the time of the first Arab raids into southern France, it was the illegitimate son of one of these mayors who took command in the crisis—Charles Martel. The principal landholder in north France and western Germany, Martel had one major rival, Eudo, warlord of Aquitaine. When news reached Charles of substantial Muslim conquests in and around Narbonne, he could see that Eudo had his hands full and monitored the outcome with great interest. As the Arabs

consolidated their position, Eudo struck back and defeated them soundly, killing their commander. But relentless as ever, the Muslims sent further expeditionary forces via the Rhone valley.

For over a decade, the Arab raiders plundered the rich lands of Provence until finally, in 732, the Arabs embarked on their second large scale invasion and crossed the Pyrenees. This time, Eudo was beaten and pursued into central France. Fearing an attack on his own lands, though more interested in the outcome of a victory achieved on his rival's territory, Charles Martel seized the opportunity of Eudo's rout and marched south. Joining



remnants of Eudo's army just south of Tours, Charles drew up his warriors in defence of this rich religious centre.

An alternative tradition, recorded by Fredegar, relates that Eudo and Charles had already clashed in several border incidents. Worsted by Charles' raiders, Eudo then invited the Arabs to join him in an attack on Martel. Therefore, in the battle that followed, Christians fought alongside Muslims against the Franks of northern France.

For a week, both forces sent raiders against each other: testing their strength. This delay allowed the Arab commander, 'Abd al-Rahman al-Ghafiqi, to secure the passage of his wagons laden with booty

back to safer zones. Why Charles did not employ the advantage of surprise to attack his foes immediately is unknown. According to Fredegar he did, but other records give time in which the Arabs were allowed to save their goods and prepare for battle. This week of waiting would also have allowed the Franks to ride through the district and gather local men to fight alongside the professional warriors loyal to Charles.

When battle was finally joined, tradition has it that the majority of Franks fought on foot, shoulder to shoulder, in an impenetrable iron phalanx of shields and spears. This was certainly true of the hastily assembled farmhands and citizens, who could do little else but fight on foot. Many of the aristocratic retainers of the leading Frank nobles, however, would have remained on their horses in the hope of rapidly exploiting weaknesses amongst the enemy.

As a force of raiders, the Muslims must have been largely mounted, and it makes sense that it was they who opened the battle. Though here again, Fredegar says that it was Charles who came upon them 'like a mighty man of war'. Such a large invasion force must have included many foot-soldiers as well, for these were still an important element of Arab warfare. Therefore, it is likely that crowds of Berbers, Arabs, recently recruited Christians and Jews, all fought side by side in a phalanx of sword and spear carriers to equal that of the Franks. There were more archers among the Arabs than the Franks, but hails of arrows were probably not a determining feature. Also, the traditional picture of lightly clad Arab horsemen hurling themselves against heavily armoured Frank foot-soldiers must be discounted. Instead, it is more likely that the Muslims, veteran raiders and well supplied with looted arms from recently defeated Frank adversaries, fielded more men clad in mail and brandishing swords than the poorly equipped levies of Charles Martel.

The fighting was fierce, lasting until nightfall. Arab and Frank horsemen probably came to blows first, as the most noble horse-warriors hoped to obtain victory quickly with an initial display of daring and skill. Once exhausted, they then fell back amidst their rows of foot-soldiers. As the battle progressed, groups of warriors advanced and entrapped isolated horsemen. Prodding them with their spears, pushing them off their horses, forcing blades through gaps in their mail and ripping off anything of value. It was a battle of muscle and

endurance; swords bashed against shields and spears pierced bodies.

Beneath their mail many of the chief warriors suffered only battering and bruises. It was the unprotected and unprepared peasant levies who were slashed and gored, trampled and crushed, and it was these men who quit the battlefield first if suffering visibly-great losses. Indeed, considering the more professional quality of the Muslim warriors it is remarkable that the Arabs did not gain another victory. But, on returning to their camps, the Muslims learned that their commander was dead and the next day they retreated before the weary but triumphant Franks.

At first, the Muslims would have seen their defeat near Tours as just a temporary setback in the overall tide of Islam. But as time passed, it became clear that this was to be the furthest north into Europe the Arabs would ever penetrate. From then on, Charles Martel kept up a constant pressure on the Muslim raiders and slowly the Franks expelled them from their recent conquests north of the Pyrenees, eventually recapturing Narbonne.

The tide had turned. The determination of the Franks outweighed that of the Arabs. Mass raiding north of the Pyrenees had become unprofitable, but the western reaction went further. In the mountains of north-west Spain, Visigoth warlords held out against the Muslims. From this kingdom of the Asturias sprung the warriors of the Reconquista. A crusader project that obsessed Christian Spain for the whole of the Middle Ages, and piece by piece recaptured the land.

In the meantime, through his victory against the Muslims, Charles Martel spread his dominion over most of southern France. The Arnulfings had risen in power and reputation to such a degree that Martel's son, Pepin III, felt confident enough to end the pretence of the Merovingians and placed himself upon the throne. The Carolingians were possessed with all the energy of a new dynasty and pursued several expansionist campaigns while, in contrast, the dynamism of the Muslims was being drained by internal dispute. A revolt by the Berbers weakened the hold of the Arabs over Spain and allowed further Christian resurgence. Nevertheless, later Arab consolidation maintained the country as a principal Muslim power, and for the next few centuries the Franks and Arabs remained uneasy neighbours •



Cycling to War

Easy to maintain and silent in advance, the humble bicycle has proved a surprisingly useful weapon in several wars, says G PAUL GARSON.



If your legs are up to it, you can bicycle through the Third Reich for about \$30 a day. Several tourist agencies provide such tours through modern Berlin. According to one company's description, the list of sites the bicycle-tourist will see include Hitler's bunker, Jewish businesses destroyed during Kristalnacht, the Bebelplatz, site of the Nazi book burning and also one of the last functional WWII-era air raid shelters. If it rains, a poncho is supplied.

During World War Two, the humble bicycle was part of the Third Reich's war machine.

While Wehrmacht cycle soldiers wore standard army uniforms, they were also equipped with a distinctive piece of rain gear in the form of a cape. A cycle troop also carried nine light and two heavy

machine guns, three 50 mm mortars and received the same training as the infantry. Prior to the outbreak of war, the regular bicycle troop consisted of 195 men, their cycle mounts painted black and manufactured first in Germany, then as the war progressed, supplied from factories in Holland, Belgium and France.

The advantage lay in the stealthy, almost silent running of their bicycles which could traverse terrain more quickly than other conveyances and at speeds exceeding slogging on foot. Bicycle troops were expected to cover 75 miles a day, although the usual distance was 60. Highly mobile, they were considered a very successful component during the campaigns in the West. No numbers exist for total production or employment of bicycles by the German military, but estimates for

1943-44 production exceed one million. In the later stages of the war as the Allies entered Germany, members of the Hitler Youth and Volkssturm were seen entering battle on their bicycles as ersatz tank killers, strapped with panzerfausts and other munitions.

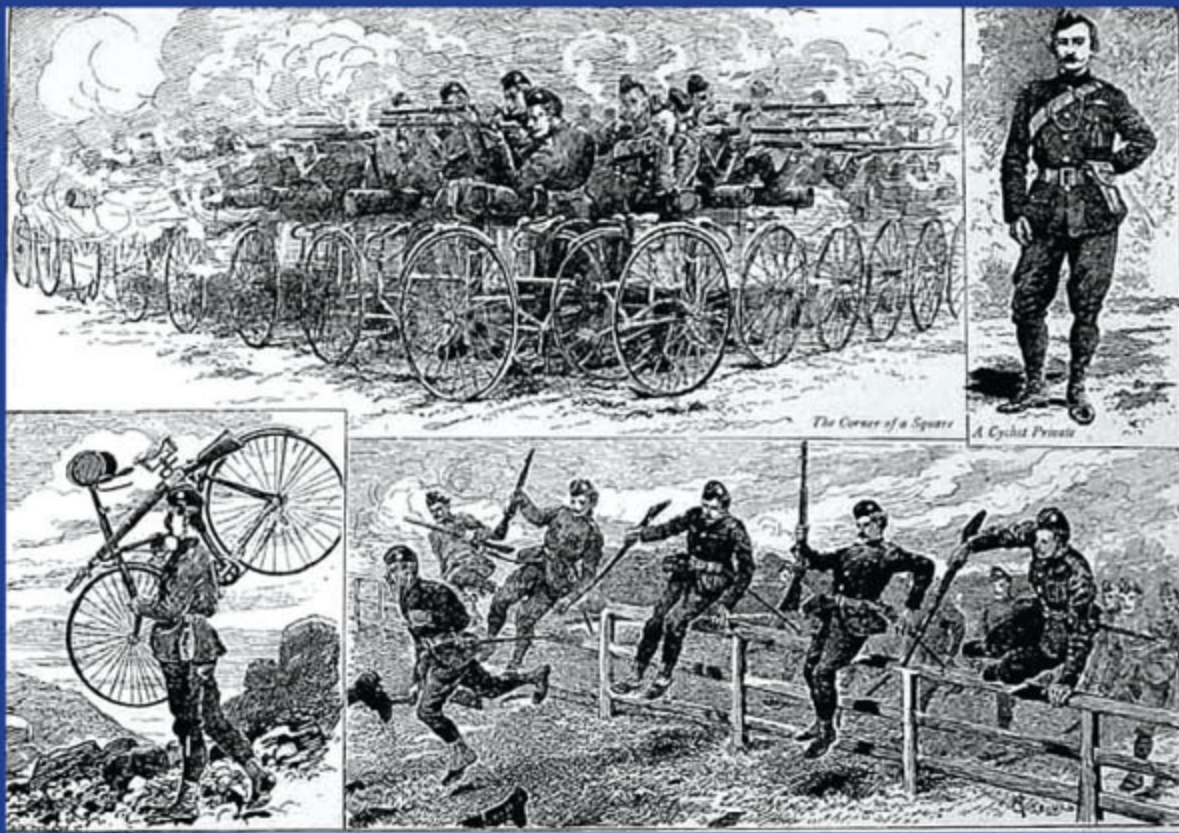
Early bikes

The story leading up to the use of the bicycle as a weapon in war begins back in the early 1800s when bicycles were basically wooden hobby horses that you sat upon and padded around using your feet, these primitive devices minus pedal and crank technology. In the 1860s, the French began leading the way to improvements on the so-called 'boneshakers'. By 1865, large front wheel/small rear wheel designs came to the forefront, eventually evolving into extremely tall front wheeled cycles, such as the 'penny-farthing', some of which required a ladder to reach the saddle.

By 1869, the first chain driven bicycle was built, the same year the public was introduced to the first ever bicycle show held in Paris. The designs shown were a leap forward, featuring all metal, light weight frames with front suspension and solid rubber tires mounted on wire-spoked wheels. The growth of the bicycle industry also prompted the mass production of ball-bearings which in itself would engender far-reaching technological advances in general. But with the outbreak and disruption caused by the Franco-Prussian War in 1870-71, France would lose its lead, opening the way for Britain to take the dominating role in bicycle production.

Beyond the introduction of ball-bearings, the next milestone in the evolution of the bicycle that smoothed out its battlefield application took place in 1888 in Belfast, Ireland where a horse veterinarian came up with the first air-inflated pneumatic tire, his name being John Boyd Dunlop—now a name synonymous with automotive tires. Inventors came up with additional enhancements for the military bicycle including sunshades that could be used as sails, the sight of which must have been startling as the 'bicycle ships' sailed along country roads, although haphazardly according to wind direction. Even less successful adaptations in the form of tricycles, quadricycles and even octocycles were configured to carry more weight, but only placed the burden on the rider and passed out of favor.

Bicycles entered military service as early as 1872 when the Italian Army



Page from the *Graphic*, an illustrated English publication, 16 March 1889, portrays a Cycle Corps within the British Army.



Line of German cycle troops on mountain road with lead medic. In addition to an Iron Cross Second Class ribbon, the bicycle soldier is identified by the rod of Asclepius patch on his forearm as a member of the sanitätskorp.



Italian Specialwaffen. A 1902 give-away card features an illustration of an Italian bicycle machinegun combination as well as a tandem machine in the background. Notations on the reverse of the card state that the weapon fired 700 rpm.



Austrian Spezialtruppen. Card of 1897 captures the action as an Austrian 'Velocipedist' bicycle trooper, his carbine strapped to handlebars, is pursued by horse mounted soldiers.

employed the tall-wheeler versions for communications on military exercises, as did the British Army in 1885, followed in 1888 by the very first specific cyclist unit—the 26th Middlesex (Cyclist) Volunteer Rifle Corps. Other nations instituted their own bicycle formations: the Swiss Army in 1891, the French and Japanese in 1892, and Germany in 1893.

Last, in 1892, was the United States when the National Guard of Connecticut became the first American military unit to officially enlist cycle riders. Colorado Militia also found a use for cycles for communications and liaison duty. Moreover, from 1896-1898, the US Army's all black Montana 25th Infantry Regiment (25 men) were involved in a fairly remarkable experiment when they traversed some 1900 miles in a 34-day marathon bike ride. As an aside to the Spanish-American War of 1898, perhaps eclipsed by Teddy Roosevelt's Rough Riders, that same regiment, now 100 strong, performed with distinction as riot control in Havana. Bicycle troops also saw action on both sides during the Anglo-

Boer War 1899-1902.

A Bicycle Boom hit Europe in 1890, with the public clamoring for safer, more user-friendly forms of the machine, with a resulting meteoric growth of the industry. Hitherto bicycle production for sport, leisure and daily transport had been dominated by Great Britain, names like BSA, Triumph and Raleigh already icons, and until that time the major supplier of bicycles to Germany. But the Continental mania for cycles ignited an explosion of German engineering and enterprise, for example the Bicycle Works Bismarck, initiated by Carl Gottlieb and Richard Holbeck in 1896. By February 1911, some 100,000 cycles had been built and sold by the company. Innovations included the development of coaster brakes by 1902, further fueling sales. Re-badged under different names for export, the Bismarck became the 'Siegfried' when sold in Bavaria and the 'Skandia' when appearing in Scandinavia. The company, like many other cycle companies, went onto build small displacement motorcycles as well.

Things geared up with the advent of

the First World War, which dramatically increased both demand, production and use of the bicycle as an implement of war. Some 150,000 cycle troops were fielded by France and Belgium, while their British allies counted 100,000 men posted to the Army Cyclist Corps with most riding BSA MK IV and V models, while the German Army would send 125,000 cyclists into the fray. American troops arriving in France in 1917 transported some 29,000 bicycles, but none directly used for military operation, rather for communications and courier duties. Casualty figures for cycle riders during WW1, calculated at the time of the signing of the Armistice in November 1918, amounted to some 6,000 killed and 8,000 wounded.

Blitzkrieg bikes

While the blitzkrieg tactics of World War Two would shunt cycle troops aside from a leading role, they would assume other tasks in the wake of the panzers rolling over Polish defences at the outbreak of war. In particular, taking part in mopping up operations, preventing Polish infantry



Wearing a much prized and sought after leather overcoat, a German soldier has attached a toy stuffed dog to his headlamp.



Young German recruits pose with their bicycles, all wearing denim fatigues over their uniforms in order to keep them clean while riding.



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US magazine advert shows a Chinese soldier with an American-made Columbia bicycle, revealing their contribution to the war effort.



Hitler Youth on patrol with swastika pennant bikes.



Three US Army soldiers pose on American civilian bicycles, December 1943.



The bridge destroyed, Japanese bicycle troops ford a river, intent on keeping their bicycles high and dry.

from regrouping into cohesive fighting units. When Hitler viewed his victorious troops in Warsaw on 5 October 1939, among the elite units paraded before him were the cycle troops of the Volks Grenadier Division.

It was a different story during the invasion of Norway, when the terrain was not conducive to tank attack and bicycle troops were called in to assist the offensive. Here a combination of armor and cycle units fought their way along narrow, icy mountain roads. Although they took heavy casualties, German bicycle troops were pivotal in the defeat of Norwegian forces.

Germany's Axis ally, Mussolini's fascist Italy focused considerable attention on the bicycle as an instrument of war. Though the soldiers of the Wehrmacht held their Italian counterparts in contempt as a result of their lacklustre performance on the battlefield, one group seemed to have excelled, the Bersaglieri or sharpshooters. During the late 1800s, they were regarded as elite troops and specialized in the high mobility afforded by incorporation of the bicycle. During WW1, Italian cycle troops gained significant fame and then later, with the rise of Fascism, became an integral part of Mussolini's war machine, although many would find themselves mounted on motorcycles as well.

While the German army was the

largest employers of cycle troops, one of the most important commando raids of WW2 involved British paratrooper cyclists. In February 1942, a diversionary flight of Royal Air Force night bombers covertly dropped a commando team near the village of Bruneval in northern France, some 12 miles northeast of Le Havre. Here, the Germans had built a well-defended and very advanced radar installation used to track aircraft heading on missions to Europe from airfields in England. The team unfolded the bicycles they had carried with them and pedaled several miles toward their target under the command of Major John D Sheffield. Arriving in silence, they totally surprised the German defenders, at least initially, and were able to plant their charges and make their way to the beach for extraction by British naval craft as the radar installation erupted in a ball of flame. Mission accomplished with only one KIA, seven WIA and seven MIA as well as all bicycles left behind.

Silent attack

German bicycle troops were first formed in 1936, each infantry regiment assigned a complete bicycle company. Various options existed for the disposition of cycle troops by their commanders. They could be grouped tactically as a complete battalion, sent out as

individual scouts, as reconnaissance patrols, for behind the line operations, or kept as reserve units. Special cycle troops were trained to act in the event of chemical warfare, a fear leftover from the use by both sides during WW1 of chlorine and mustard gas attacks. The modified bicycles featured frames that accommodated a chemical warfare detection kit that could also identify the type of agent. The cyclist's saddle-bags carried a gas mask and protective suit as well as hood, boots and gloves.

Among the German bicycles produced during the Third Reich era was the Adler, beginning production in 1934 and noted for the first incorporation of a manually operated transmission, in this case one of three-speeds, which made hill-climbing and other such pursuits more within the rider's reach, as was the hand-shifting lever. Adler was also well-known for its small displacement motorcycles and its stalwart typewriters.

Anker Werke Bielefeld, founded in 1867 initially for the production of sewing machines, jumped on the bicycle bandwagon in 1894, adopting the anchor as its logo and emblem. During 1939-45, and engaged in war production, it used slave labor, as did many German companies both large and small. It continued making bicycles until 1947, then concentrated on



His mount loaded with gear, a German cycle trooper pauses beside the hulk of a Russian T-24 tank during the 1941 summer invasion of the USSR. Despite early German optimism surrounding bicycle troops as a result of their success in the Western campaigns, the rainy seasons that turned the unpaved roads and paths of Russia into quagmires effectively immobilized vehicular traffic, including the bicycle troops.



With his sporty bicycle by his side, a German soldier summons his comrades with a bugle.

electronic business machines.

The German Herkules was noted for its 'war-ready' robust construction, as were NSU cycles, the company supplying the Wehrmacht with several motorcycle models. Other suppliers included Puch and Opel, the companies also building motorcycles and tanks respectively. A special compactable bicycle was made available for paratrooper members of the Fallschirmjäger. In the last desperate battle of the Ardennes, German SS units Leibstandarte and Das Reich fielded several bicycle platoons, the move prompted as a means to conserve fuel needed by Wehrmacht motorized forces.

The role of the German bicycle soldier was summed up in a 1939 document entitled 'The Versatility of the Cavalry' penned by a Lieutenant Elert of the 17th Cavalry Regiment. He wrote: 'The bicycle patrol works its way toward the enemy over roads and paths no matter how narrow. No sound betrays them. They are completely independent of fuel or fodder. The bicyclist can advance as long as his strength allows.'

Special bicycle platoons were employed to combat local resistance groups in German occupied countries, cycles often loaded into trucks and then dismounted for use on narrow paths unsuited for larger vehicles. The Resistance also counted on bicycles for stealth and speed. For example, some 500 bicycle-mounted Belgian sabotage teams wreaked havoc in hit and run actions against German convoys, outposts, communications and troops, throughout the occupation.

Bikes like tanks

Japanese troops rode to war on bicycles, a function of necessity in as much as the island nation, with at best ten per cent of the industrial capacity of the US, was severely restricted in regards to petroleum products, especially fuel. In its 1937 invasion of China, Japan employed some 50,000 bicycle troops, many as light-machine gun corps. Then in 1942, three divisions (the 25th Army's Imperial Guards, the 18th Division and the 25th Division) under the direction of General Tomoyuki Yamashita defeated the entire British Army and Commonwealth forces in Malaya and Singapore in just two months, defeating an enemy three times their number.

Described as the Japanese blitzkrieg, the strategic conquest of the Malay Peninsula succeeded because Japanese strategy maintained constant pressure on retreating British forces. This, in part, was because its soldiers had been issued thousands of bicycles which were able to take advantage of Western Malaya's good quality road system. Japanese soldiers, rigorously trained for bicycle combat, reportedly pedaled as much as 20 hours at a stint. As Japan had supplied large numbers of bicycles to pre-war Malaya, spare parts were found in abundance. But even if their tyres gave way, the riders continued on the wheel rims. The sound produced reportedly was mistaken for the clang of tank treads and added to the demoralizing effects of the rapid Japanese advance upon their British adversaries. The use of firecrackers tossed by the cyclists also added to the impression.

The 25th Army's Chief of Operations



AK-47s and bicycles: female members of the Vietcong stand by their heavily loaded French-made bicycles.



During a Nazi parade, Wehrmacht bicycle squadrons follow in the steps of their cavalry comrades.

and Planning Staff, Colonel Tsuji Masanobu summed up the importance of the bicycle, when he stated: 'Even the long-legged Englishmen could not escape our bicycles. This is the reason they were continually driven off the roads and into the jungle where, with their retreat cut off, they were forced to surrender.'

The US Army did have some forward thinkers in regards to the application of bicycles. In 1897, an enterprising officer of the Signal Corps, one Captain RE Thompson, developed a means for quickly



German cavalry corps consisted of detachments of horse, bicycle and motorcycle mounted troops.

laying telegraph and telephone wires via a special bicycle attachment. The Army also commissioned the Pope manufacturing company, later known for their motorcycles, to develop a bicycle that could carry a machinegun. Pope also came up with a tandem (dual passenger) bicycle that carried a fair load of munitions, including two Colt revolvers, a 12-shot repeating rifle, a case of signal flags and not to forget two overcoats and two blankets.

Bicycle troops, however, were not deployed by the American military during WW2, although some 60,000 US bicycles were shipped to the various fronts for utility and recreation purposes. GIs often took advantage of abandoned German bicycles and turned them against their former owners. Ironically, some of the first US casualties of WW2 occurred during the attack on Pearl Harbor when many pilots and support crew racing on bicycles to their airplanes were strafed by Japanese aircraft.

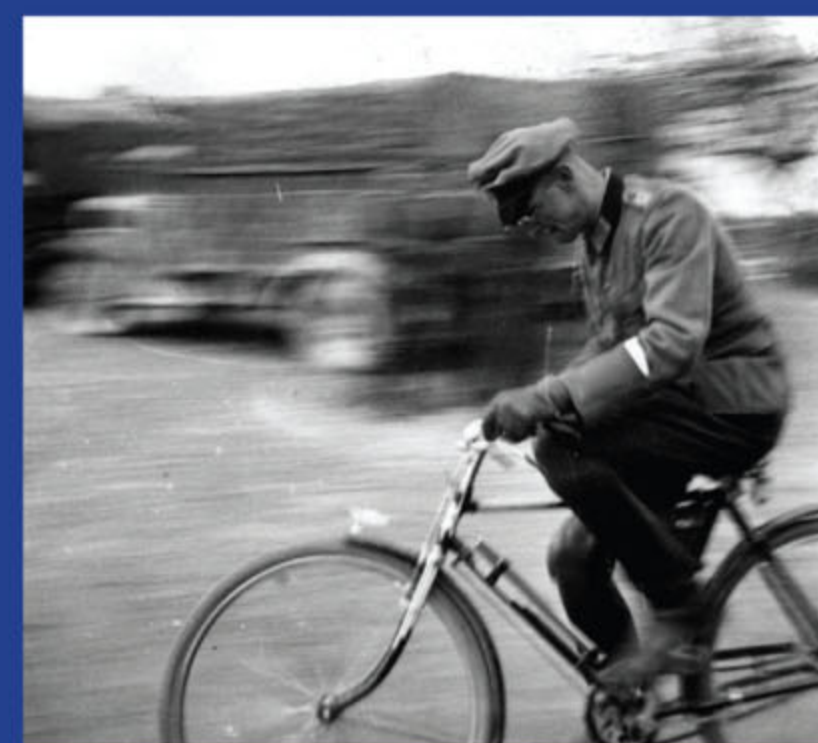
Vietnam winner

The bicycle continued to exert its influence on military strategy far into the 20th century. In Vietnam, it was used widely by the guerilla army of Ho Chi Minh and General Vo Nguyen Giap as a means of supply employed against post-war French forces seeking to re-occupy their former colony. Thousands of so-called bicycle coolies were used to ferry rice and

ammunition, as much as 500lb per bicycle, the use of which contributed greatly to the climactic battle of Dien Bien Phu and the defeat of French Indo-China forces in 1954. Adding insult to injury, the Viet Minh legions of bicycles were French-made Peugeot.

A decade later, the Viet Cong would again rely on bicycles as two-wheeled pack horses in their successful effort to help thwart the hi-tech efforts of American firepower. It is not perhaps an over-statement to place the bicycle as the single most important means of supply for Vietnamese Communist forces and the means by which they won the 30-year war of Indo-China.

It was a point perhaps best illustrated by a London newspaper report of 3 October 1967 that described a meeting in Washington DC during which Senator William Fulbright, then chairman of the United States Foreign Relations Committee, responded to a New York Times reporter's testimony regarding the extensive use of bicycles by the Communists. The reporter, Harrison Salisbury, recently having visited Hanoi, North Vietnam, stated: 'I literally believe that without bikes they'd have to get out of the war.' Senator Fulbright responded with: 'Why don't we concentrate on the bicycles instead of bridges? Does the Pentagon know about this?' His questions brought amused laughter... laughter that eventually faded •



A bizarre incident of bicycle warfare involved skirmishes in December 1944 between soldiers of the American 3rd Armored Division and Waffen SS troops in the area near Manhay, Belgium. A lone German was seen pedalling furiously into the midst of heavy firefights, literally dodging bullets. He also was known to lie in ambush where his expert marksmanship took its toll. Before his position could be reached, he had fled on his bicycle. At other occasions, he would suddenly burst upon an American patrol, sometimes out of a snowstorm and fire his sub-machine gun, then turn and pedal away. His toll reached 22 Americans killed. A 'wanted' bulletin went out for him and his luck ran out, but not by a bullet. The audacious bicycle trooper was captured and survived the war as a POW.

Great Military Artists

Robert Gibb

Scotsman Robert Gibb earned his pedestal in the pantheon of high Victorian battle painters with a trilogy of iconic scenes of the Crimean War of 1854-56. 'The Thin Red Line' painted in 1881, 'Alma: Forward the 42nd' of 1889, and 'Saving the Colours: the Guards at Inkerman', completed in 1898. The first mentioned is now housed in the National War Museum, Edinburgh, the second at the Glasgow Art Gallery and Museum, and the third hangs in the Naval and Military Club, London.

Thin Red Line

Gibb was born in Edinburgh in 1845. He studied art at evening classes at the Royal Scottish Academy (RSA) and began exhibiting at that august institution in 1867, the first of 143 of his paintings to be shown there. His early work portrayed romantic literary scenes. His initial foray in the military genre came with 'Comrades' of 1878 (now in a private collection), which shows a Highland soldier coming to the aid of a fellow Scot fallen in battle.

His most celebrated work—'The Thin Red Line'—depicts the heroic ranks of the 93rd (Argyll and Sutherland) Highlanders, standing with bayonets fixed, ready to receive unsupported the full charge of the Russian cavalry, whom they drove off in confusion at Balaclava, 25 October 1854. The painting was inspired, it is said, by the immortal phrase penned by The Times war correspondent William Howard Russell: 'That thin red streak topped with a line of steel.' This impressive canvas was exhibited at the RSA in 1881 and the Royal Academy, London, the following year. Published lithographs of the oil painting adorned the walls of homes and clubs throughout the land.

Painter to the King

Gibb, ever the patriotic Scotsman, eulogised the martial spirit of the Highland soldiers—he portrayed them as tough, bearded, kilted warriors resolute in the face of danger, upholding the honour of clan and country. 'Alma: Forward the 42nd,' shown to high praise at the RA in 1889, depicts the advance of the Black Watch led by Sir Colin Campbell, commander of the Highland



'Saving the Colours: the Guards at Inkerman' by Gibb.

Brigade, who largely won the day. Gibb's painting of 'Dargai,' exhibited at the RSA in 1909, records the gallant Gordon Highlanders storming the heights of Dargai on the North-West Frontier of India during the Tirah campaign of 1897.

Robert Gibb was Keeper of the National Gallery of Scotland from 1895 to 1907 and served as Painter to the King

from 1908 until his death in 1932 aged 87. He continued painting military scenes throughout the Great War. His last work was 'Backs to the Wall, 1918', which appeared in 1929 (now in the Arbroath Museum, Angus). Unusual for an artist, he was given a full military funeral and buried in Edinburgh, city of his birth •

Peter Newark

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Re-enactors

When Re-enactment Goes Wrong!

Re-enactment can be a dangerous game. PHILIPP ELLIOT-WRIGHT recounts the sometimes deadly moments when recreated artillery explodes.

Whilst various accidents occurred during the early days of re-enactment, by the 1980s both the manufacture of guns and the training of crew improved to the point that few of the subsequent incidents ever involved re-enactors. Most did not involve professionally cast guns or trained re-enactment crews, but rather homemade pieces and untrained crew.

Catastrophic failure

The first incident to be related reveals the danger of inadequate procedures. In 1981 at an American War of Independence event staged in the city of Pittsburgh, during the firing of pyrotechnic projectiles directly into the air from the cannon, the lid of one of the limber chests packed with charges was left open. A stray spark entered the limber chest with explosive results leaving 19 injured.

Over a decade later, during March 1997, at an American Civil War event in Demopolis, Alabama, whilst a charge was being rammed into a bronze 12-pounder Napoleon, the gun suffered a premature ignition when there was a failure to ensure the gun was properly sponged to extinguish any remaining sparks from the previous discharge. The rammer was ejected, tearing off the thumb of the gunner's finger and seriously damaging the remainder of the hand, leaving it so ruined that the orthopaedic surgeon was obliged to amputate. This type of incident is probably the most common with cannon—the crewmember ramming the new charge suffering the catastrophic injury.

However careful the loading procedure, if the wrong propellant is used as the main charge, it can cause a catastrophic failure. Cannon are designed to take black powder, a low explosive. Gunpowder combusts relatively slowly, allowing a gradual build up of pressure along the length of the barrel. Modern explosives detonate at

a far higher speed causing substantially higher pressure in the breach. In late 1999 in Michigan, an 80-year-old miniature gun, designed to be used with black powder was instead loaded with Pyrodex, a modern propellant. The charge when ignited had the same explosive potential as one and a half sticks of dynamite and blew the cannon apart like a grenade—a female spectator standing over 100 yards away was killed by the flying debris.

In July 2002 in Illinois, a newly purchased civil war gun was being fired at a public display. The barrel was some four feet in length, with a six-inch diameter steel-lined barrel. The first round failed to ignite despite repeated attempts. Rather than worm out the charge, the gun commander decided to 'solve' the problem by loading a further charge of smokeless powder and additional wadding on top of the existing charge. In a sense the solution worked, the charge did successfully detonate. However, the combination of modern explosives and a double charged and wadded gun resulted in complete structural failure and the barrel exploded, killing one of the crew and leaving the other eight seriously wounded.

Stress fracture

Whilst modern re-enactment cannon are cast by professional foundries and carefully proof fired for safety, there are still a few home made pieces about that are used by amateurs at home or at other forms of celebration, and they sometimes fail with spectacular effect. During the spring of 2007 in Washington, a ceremonial cannon had been used to start the annual American football game for over 20 years. The gun had originally been manufactured in the college metal shop during the 1980s by welding a steel barrel to a metal breach plate and then casting a fibreglass sleeve to

resemble a real cannon around this. The gun was fired by members of the college ROTC cadets.

On this occasion, when the first round was fired it was noticed that a burst of smoke was released around the breach and the muzzle blast was far less dramatic than in previous years. Rather than take notice of this (it is a classic sign that there is a stress fracture in the breach that is venting gas), they loaded it up again and fired. The breach exploded, severely injuring the five-crew members. Amazingly, it was later revealed that the barrel had been X-rayed the year before and the fracture identified, but the risk was dismissed!



Finally, there are some that consider it appropriate to fire original cannon, despite the fact they have lain rusting away in fields or at the bottom of the sea for decades or even centuries. In the Bahamas, during the New Year celebrations of 2008, a cannon originally taken from an old fort some 60 years before had been fired every year at midnight. The 'gunner', stoked up on New Year enthusiasm, loaded the charge and firmly wadded it home with handfuls of old oily rags. When it discharged, the muzzle flew apart and lumps of the barrel were found up to 1000 feet away, with one chunk of metal striking a female spectator some 300 feet to one side, leaving her with several broken bones and internal injuries •



IJA TYPE 97

TONI CANFORA builds Fine Molds' 1:35 kit of the Imperial Japanese Army's Type 97 tank from WW2

The Type 97 Chi-Ha from Fine Molds is an excellent model; the mouldings are first class, the level of detail is high and the fit causes little problem.

Included in the kit is also a small PE fret carrying the exhaust covers. The construction is pretty straightforward, starting with the chassis and running gear. There are two wheel-bogies on each side and these can be fixed at an angled position if desired, making it possible for them to follow the terrain in a diorama.

This kit was built more or less straight from the box but I decided to add a few items apart from the Friulmodel tracks. The lens of the front headlight was replaced with a clear item from Resicast. These come in a number of sizes and I can strongly recommend them as they really lift the model.

Painting the camo

Up until 1942, most Japanese tanks used a standard pattern consisting of

a base colour of medium brown on which green, red-brown and yellow was applied. The yellow colour was used to break up the surface and contours of the tank. From wartime pictures it seems that the colours were applied with hard edges. I found it a bit hard to find English literature on Japanese tanks but some new titles has recently been released. I relied mostly on Osprey's 'Japanese Tanks 1939-45' by Steve Zaloga, combined with some references found on the internet.

Conclusion?

All in all, this was a fun project that put both my patience and skills to the test. A four colour hard edge camouflage is a real challenge but very rewarding in the end. And diving into a new world of armoured vehicles, in this case Japanese was inspiring •

Fine Molds kits are imported in distributed by Modelwholesale UK; www.modelwholesaleuk.com



Militaria

Unusual Lots

Wallis and Wallis frequently uses the London Arms Fair to put items from their speciality Connoisseur Sale on display and there was plenty of interest in the lots at the latest fair. The Connoisseur Sale is interleaved with a normal sale of antique arms and armour and the sales in October promised to be busy. There were 216 lots in the Connoisseur section and 541 in the ordinary sale.

Trafalgar bucket

The second Connoisseur lot was a leather fire bucket dated 1803 and bearing the name Victory, which was more than sufficient to push the winning bid up to £2,500. Provenance is so important and



HMS Victory leather fire bucket, £2,500.
(Wallis and Wallis)

lot 5 also had a very desirable provenance for it was a tipstaff engraved Police Office Bow St N2. This inscription meant that it came from the most famous of pre-Metropolitan Police stations and the N2 suggests that it might have been carried by one of the Night Patrols introduced in the early 19th century to police the streets of London.

Included in the sale were 24 early books dealing with arms and armour, some of which were very rare and consequently were keenly competed for and three sold for £2,000, £1,250, and £2,600. Among the small selection of Third Reich material, as

is usual, daggers claimed pride of place; a good NSKK 1936 Pattern sold for £1,850 and a 1936 Pattern SS Officer's dagger reached £2,700 before the hammer came down. The top figure in the sale was an astonishing £15,200 paid for a wooden war club, Wahaika, as used by the Maoris of New Zealand, simple in shape but incredibly rare. At the opposite end of the scale, the cheapest item was a Hitler Youth bayonet worn by Special Guard Units, which made £110.

There were a number of lots of European armour, including a rather weird looking 'spider helmet'. These rare pieces comprise a framework of bars to protect the upper part of the head with a series of hinged bars which hang down to guard the face. The benefit of such a system is open to doubt and the fact that these helmets are very rare suggests that they were never a popular substitute for a conventional helmet, but it sold for £2,000. A 17th century pike man's breast and back plate fetched £2,100. A good quality and largely undamaged Japanese armour with helmet and crest was pushed to £4,500. Also from the Far East was a well provenanced Chinese sword of good quality and condition, with its accompanying belt and eating tools, which sold for £7,200.

One group of antique pistols that has steadily increased in value is those from Turkey and the Balkans and this process has no doubt been accelerated by the publication of Robert Elgood's book on 'The Arms of Greece and the Balkans'. The increased demand for such items was clearly shown by the price paid for a pair of elaborately gold and silver decorated, Turkish flintlock holster pistols. The quality suggests that they were probably intended for presentation to some important person and the final price was £7,600.

Reasonable prices

In addition to the select Connoisseur sale,



Close helmet, c1600, £1,500.
(Wallis and Wallis)

there was another more general sale with prices well within the pocket of ordinary collectors and dealers; only one lot sold for more than £1,000. There were plenty selling for less than £100, including some groups of trench art, converted shell and cartridge cases. Pieces such as these are little regarded by most collectors but could well be highly valued as World War One recedes further and further into the past. One lot of 21 pieces sold for £30.

For any book collector with some spare cash there were dozens of highly attractive arms, armour sale catalogues and reference books, including some highly prized volumes on offer and few sold for more than £100. Another section offered a variety of air weapons, the majority rifles, at attractive prices although one or two special models, such as a BSA Club Airsporter underlever air



Pair of 19th century Turkish holster pistols, £7,600. (Wallis and Wallis)

rifle, did reach £430.

The highest price of the sale was paid for a close helmet dating from around 1600 and despite suffering from some areas of rust, bidding took the figure to £1,500. Not far behind was a good example of a Persian shamshir with finely curved blade and complete with its silver-decorated scabbard, selling at £1,150. A large selection of percussion revolvers was in the sale and these sold well at very reasonable prices •

Frederick Wilkinson

Museums & Shows

Jersey Militia

JOHN NORRIS visits a small regiment with a long history

On 14 February 1946, the Jersey Militia ceased to exist as a military force when the War Office advised the Lieutenant Governor of the island of Jersey that the regiment was to be disbanded. Nine years later, the Regimental Colours were laid up in the Parish Church of St Helier where they remain to this day.

Rocky islet

The Jersey Militia had never been a large force but it was unique to the island. Its establishment can be traced back to 1337 during the reign of King Edward III who ordered the raising of a local force for the defence of the island. Perhaps its most memorable action was the part the regiment played during the French invasion of the island in 1781 when the troops acquitted themselves most favourably. Despite the smallness of the regiment, the men serving in its ranks fought in the trenches of the First World War and in June 1940 they left just before the island was occupied by German forces. As the 11th (RMIJ) Battalion of the Hampshire

Regiment, it served overseas and as that regiment it was finally disbanded. The prefix title 'Royal' was granted to the Jersey Militia in 1831 and over the years has had other changes in name.

All these facts and many more are



explained at The Royal Jersey Militia Regimental Museum, housed in a building within the grounds of Elizabeth Castle, which lies on a rocky islet in the bay of St Aubin. The castle closes during the winter months, and access to the exhibition is restricted between April and October. The display

is arranged on two floors and shows paintings, uniforms, weaponry and extracts from letters all relating to the regiment and in particular the battle of Jersey in 1781.

Medals and artefacts presented to the men of the regiment who served in France in the First World War are on display along with photographs and extracts of documents. Regimental silver adds to the display and the history of other units associated with the Militia is also told within the exhibition. These include formations such as the Jersey Light Infantry, Royal Jersey Artillery, Royal Jersey

Militia Dragoons, a mounted regiment, and the companies of engineers and medical staff. Archive material relating to the Militia is held by the Jersey Archive at Clarence Road, St Helier JE2 4JY. The centre can be contacted by telephone on 01534 833300. Elizabeth Castle can be contacted by telephone on 01534 723971, but for times of opening it is suggested that you visit www.jerseyheritage.org

January UK Diary

■ 6: Thursday

Lunchtime lecture at the National Army Museum at Chelsea in London with guest speaker, Dr Toby Capwell, presenting a talk entitled 'Myths and Misconceptions of Medieval warfare'. Presentation begins at 12.30pm with free entry. Further details telephone 020 7730 0717 or visit www.national-army-museum.ac.uk

■ 9: Sunday

Arms, Medal and Militaria Fair is being held at the County Hall, Durham City DH1 5UL. All forms of collectables available from books to uniforms. Doors open 10am to 3pm. Further details telephone 01423 780759 or visit www.northernarmsfairs.co.uk

■ 13: Thursday

Lunchtime lecture at the National Army Museum at Chelsea in London with guest speaker, Mick Crumplin, presenting a talk entitled 'Support for Wellington's army; Medical aspects of the Peninsular War'. Presentation begins at 12.30pm with free entry. Further details telephone 020 7730 7717 or visit www.national-army-museum.ac.uk

■ 16: Sunday

Arms, Medal and Militaria Fair is being held at the Cedric Ford Pavillion, Newark Showground NG24 2NY. All forms of collectables from badges to weapons. Doors open 10am to 3pm. Further details telephone 01423 780759 or visit www.northernarmsfairs.co.uk

■ 20: Thursday

Lunchtime lecture at the National Army Museum at Chelsea in London with guest speaker Franz Wanhof presenting a talk entitled 'The Garrison project; The drawdown of Britain's biggest garrison outside Britain'. Presentation begins at 12.30pm with free entry. Further details telephone 020 7730 0717 or visit www.national-army-museum.ac.uk

■ 23: Sunday

Arms, Medal and Militaria Fair is being held at the Village Hotel, Whiston, Liverpool L35 1RZ. All forms of collectables available. Doors open 10am to 3pm. Further details telephone 01423 780759 or visit www.northernarmsfairs.co.uk

■ 27: Thursday

Lunchtime lecture at the National Army Museum at Chelsea in London with guest speaker, Dr EJ York, presenting a talk entitled 'Amanullah's Afghan War, 1919: A British Political Debacle'. Presentation begins at 12.30pm with free entry. Further details telephone 020 7730 0717 or visit www.national-army-museum.ac.uk

■ 30: Sunday

Militaria 2011 is being held at Stoneleigh Park, Coventry, Warks. Massive indoor militaria fair and much more besides. Further details telephone 01283 820050 or visit www.militariashows.com

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Book Reviews

Supermarine Spitfire

by Dr Alfred Price
(Ian Allen) 128pp,
hardback, £19.99



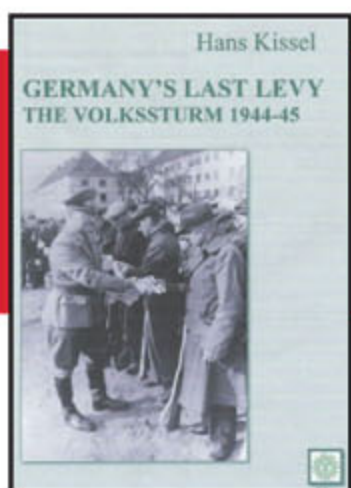
The Spitfire is the iconic fighter plane of the RAF in WW2. Even today the distinctive sound of its Rolls Royce Merlin aero-engine sends a tingle down the spine of anyone fortunate enough to hear it. It was a truly magnificent machine, going through six main variants, and when tested against the Luftwaffe's Messerschmitt Bf 109 e in 1939 outpointed it on almost all counts. This gave its daring young flyers justifiable confidence and there is no doubt that the aircraft played a crucial role in winning the Battle of Britain in 1940 and later years.

The author, a veteran flyer, although too young to take part in the war, writes with enthusiasm and real affection about his subject. This is a beautifully produced book, lavishly illustrated with black-and-white and colour photographs, artists' reconstructions and cut-away drawings. There is plenty of information about the tactical use of the plane, too. Anyone who does not know the meaning of the RAF codenames such as Circus and Rhubarb, will soon find out. This is essential reading and provides a wonderful preparation for a visit to an Air Museum such as Duxford in Cambridgeshire. There are over 70 craft airworthy world-wide today, one third of them in the UK, so there is still a good chance to see the plane and hear its engine's roar.

Matthew Bennett

Hitler's Last Levy: the Volksturm 1944-45

by Hans Kissel,
trans CF Colton
(Casemate) 230pp,
hardback, £29.95



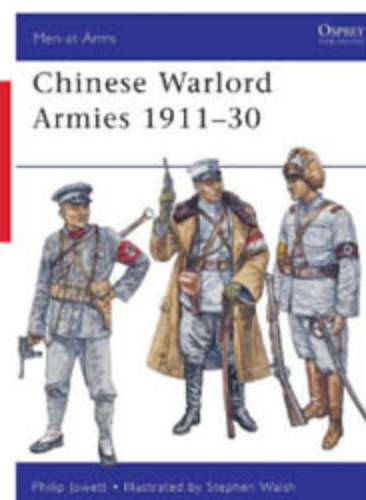
In September 1944, hard-pressed on all fronts and desperately short of manpower, Hitler authorised the formation of what in Britain four years earlier had been known as 'Dad's Army'.

Elderly men and young boys, normally excused service, were recruited into poorly organised and miserably-equipped units hoping to stem the Allied advance, especially the Soviet forces on the Eastern Front. This book was originally published in German in 1962, and has now been expanded and provided with an additional section on arms and equipment, together with eight colour pictures of uniforms, to support the many black-and-white photographs that illustrate the text. This makes it an invaluable source for military historians and wargamers interested in these last-ditch formations. The most popular weapon for these scratch forces was the Panzerfaust, a close-range anti-tank weapon which required almost insane courage to use. Unsurprisingly, most of its operators did not survive the encounter, and nor, despite their efforts, did the Third Reich. There is a terrible poignancy, especially in the photographs, in this story of hopeless resistance that an evil regime demanded of its patriotic population.

Matthew Bennett

Chinese Warlord Armies 1911-30

by Phillip Jowett
(Osprey Men-at-Arms 463) 64pp,
softback, £9.99



Anyone looking at China today must be amazed how far that nation has come, given that almost half of the 20th century was spent in the grip of war. As it turned out, the Warlord era was only a prequel to the much nastier fighting of 1931-45 against the Japanese. As might be expected of a period of civil war, there are a bewildering range of forces described, a strange mixture of the traditional—big sword commando units used for both fighting enemies and executing their own men who had failed—and the modern—air forces, armoured trains and chemical weapons. This book provides a brief narrative of events, and describes the main players before equipment and weaponry used in combat.

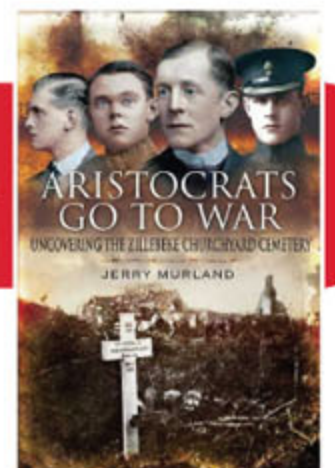
The illustrations are of a high

standard with some energetic reconstructions by Stephen Walsh and a wide range of photographs depicting personalities, uniforms, weaponry and even tactics, the last always being difficult to represent. The book is a companion to the previously reviewed Campaign Series volume on the Chinese Civil Wars and highly recommended to those seeking to understand a kind of warfare that was both very different and similar in form to contemporary Western campaigns.

Matthew Bennett

Aristocrats go to War—Uncovering the Zillebeke Churchyard

by Jerry Murland
(Pen & Sword) 190pp,
hardback, £19.99



‘There is a corner of a foreign field that is forever England’—this book captures the true spirit of Rupert Brooke's words. Its focus is on the lives of the 17 men who are buried and commemorated at Zillebeke, having fought in the First Battle of Ypres. It is known as the aristocrat's cemetery because of the high proportion of nobility and landed gentry it contains. The author has made good use of private papers, personal and war diaries as well as the National Archives. The photographs support the text well, although more maps are needed, especially in respect of the tactical actions described.

The early chapters described the Army reforms of Cardwell and Haldane and outline the military training undertaken by the Edwardian officer class. The Public School ethos, Oxbridge and Sandhurst played a major role in this. The battles of Mons and Ypres are covered, with the exploits of the 17 woven into the narrative. There is rather too much detail on Ypres for the general reader, though. Aspects of commemoration through letters home, or to fellow officers and soldiers, war memorials and dedicated stained glass windows in their local churches round out the picture of the men studied.

John Allen

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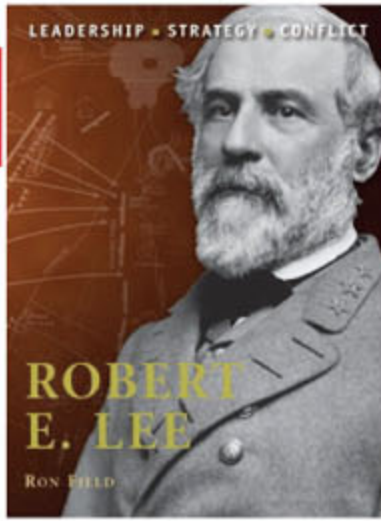
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Book Reviews

Robert E Lee

by Ron Field
(Osprey
Command)
64pp, softback,
£11.99



The son of an American War of Independence hero and a career military engineer, Lee's first taste of military action had to wait 22 years after commissioning from West Point. He served with distinction in the Mexican War of 1846-47 when both his bravery and professional skill were praised. Both he and 'Jeb' Stuart took part in putting down John Brown's rebellion in 1859, but when Secession began his conscience dictated that he should serve the South. His first campaign of 1861 was undistinguished, until President Davis entrusted him with overall command when his military genius shone through. Decisive victories at Fredricksburg and Chancellorsville enabled the invasion of the North and the 'high watermark of the Confederacy' at Gettysburg July 1-3, 1863.

Lee blamed himself for that defeat and offered his resignation, which was refused. The attritional nature of the war, in which under the capable command of US Grant, the North's superiority in men and material eventually told, meant that Lee's talents were in the end to no avail. Even after the collapse of the Confederacy, White Southerners loved him and 150,000 turned out to witness the unveiling of his equestrian statue in 1890. In the small space allowed by this series, the author has produced a balanced account, well illustrated with pictures and maps. Anyone with an interest in the ACW should read this book.

Matthew Bennett

The Restless Quest

by JP Cross (Blenheim Press) 443pp,
hardback, **£15.00**

The subtitle of this book is 'Britain and Nepal on a Collision Course, how the British Gurkha connection

started, 1746-1815', which places it in a historical context, but it is in fact a novel largely dedicated to the wars that helped to make British India. Its author is a remarkable character, a former British Gurkha officer who served for almost four decades in the Army. He has already written ten books on Nepal and the Gurkhas, so is effectively their official historian. He has lived in the country since he retired in 1982, and his love for the place and people pours out from his text.

The story is an exciting one culminating in the Anglo-Nepalese War of 1815-16 in which the book's hero, the by then 70 year-old Bhakti Thapa, is killed after the Gurkhas conducted a stalwart defence, followed by a treaty of eternal friendship. This people's warrior virtues have been recruited into British forces ever since, becoming formally part of the Indian Army in 1857 and remaining even after Independence in 1947. Recently they have received equal opportunities in today's Army in which they are a highly valued component.

Matthew Bennett

Deutsche Fertigungskennzeichen bis 1945

by Michael Heidler
(Visier Edition),
softback, 500pp, **Euros 37.00/\$67.00**

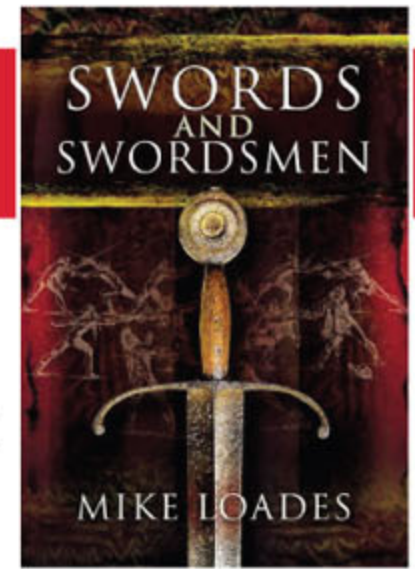


Taking seven years of research, this book is about the secret German manufacturers' codes of World War Two. These code systems began after WW1 to cover the manufacturers' names on weapons, ammunition and every other kind of military equipment like parts of airplanes, vehicles, ships or radio equipment. It was used until the end of WW2 in 1945. The book is sorted in two ways (after codes and after company-names), contains all code systems (abbreviations, number-codes, letter-codes, LDO-numbers for medals & insignias and the RZM-numbers for NSDAP- & SS-equipment). The official list with letter codes ends with 'ozz'. The text-part is bilingual written in German and English language.

Peter Marriot

Swords and Swordsmen

by Mike Loades
(Pen & Sword)
494pp, hardback,
£40.00



Many readers will know the author from television programmes on martial combat, where his enthusiasm, energy and skill at arms never fail to dazzle. Now this man who has wielded so many swords takes up his pen to record this iconic weapon across five millennia and a dozen cultures. His approach is episodic, choosing a remarkable individual, a particular event or a cultural feature, such as duelling, in order to explore the diversity apparent in the long metal hand-arm. He emphasises the human aspect with studies of Tutankhamen, Raedwald, King of the Angles, Henry V of England and the great American Civil War cavalryman JEB Stuart and GA Custer, amongst others, and their personal weapons.

There are also some fascinating facts, such as the sword of the Chinese emperor buried with the thousands of protectors of his Terracotta Army: 'was discovered still sharp and still gleaming because of its chromium coating'. The famous samurai sword is not neglected, and throughout there is careful attention paid to techniques for producing quality steel for the very best weapons, often visible in the watery marks on the blade. This book is truly a high quality product, beautifully produced and with lavish illustration throughout, many in full colour. As well as pictures of weapons, often in close-up, there is a wide range of pictures showing swords being used for ceremonial purposes, in battle and for sport. A great read and highly recommended.

Matthew Bennett

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SS5714 - M24 Chaffee Walk Around



The M24 was armed with a 75mm main gun, the Chaffee was able to dispatch many of the foes its predecessors had unsuccessfully faced, and the M24's torsion bar suspension gave it a lower profile and smoother ride while making it an improved gun platform. Produced for the US military until 1950, the Chaffee continued to take the field around the world until well into the 1970s. Packed with over 200 photos, plus colour art and profiles; 80 pages.

SS5713 - Panzer 38(t) Walk Around



The Panzerkampfwagen 38 (tschechisch) Armoured Combat Vehicle 38 (Czech) was one of the most important tanks in the Wehrmacht arsenal in the first half of WWII. Originally produced near Prague as a light tank LT vz. 38 - Lehty Tank vzor 38. Renamed as the German name Pz.Kpfw.38(t), the vehicle saw action in the Polish and French campaigns and took part in the invasion of the Soviet Union during the summer of 1941. Illustrated with over 300 photographs, color art, and profiles; 80 pages.

SS7007 - Great Battles of the World: Britain 1940



The RAF fights a Desperate Battle Against the Luftwaffe. The confrontation between Britain's Royal Air Force and Germany's Luftwaffe was the first large scale success against Hitler's aggression, and it is one of the defining episodes in the long history of the British nation. Very inclusive account includes comparison of the Spitfire Mk.I vs Bf 109E, the bombing of London, Operation Sealion, Italian involvement, foreigners in the RAF and the nature and personalities of the opposing commanders. This volume allows the reader to experience the titanic battle as never before: tactics, aircraft, equipment, uniforms, and the men and women who lived it. Enriched with color and b/w photographs (including 10 page Photographic Tribute to the Battle of Britain), color maps, 50 aircraft profiles and 9 color uniform illustrations. A fitting tribute and record of "their finest hour", 160 pages.

SS2044 - Italian Truck-Mounted Artillery in Action



Italian military planners saw the need for highly mobile artillery early in the 20th Century. Accordingly, Italy began mounting anti-aircraft weapons on truck chassis prior to WWI, giving birth to the autocannone, a weapon concept which would soldier through both World Wars. Other vehicles, some captured, were mated with a wide variety of weapons, often in the field. Illustrated with over 200 photographs, plus color profiles and detailed line drawings; 52 pages.

SS5712 - M3 Medium Tank Lee (Lee & Grant) Walk Around



The M3 Medium Tank was designed as an answer to European battlefield conditions at the start of WWII. The solution was the M3's unconventional design, which features a 75mm main gun mounted in a sponson on the right, front of the hull. The British dubbed it 'General Grant' and named the US Army version 'General Lee.' This book takes a detailed look at the M3 Tank with more than 200 photographs, color profiles and detailed line drawings. 80 pages.

SS7005 - Great Battles of the World: Berlin 1945



By the dawn of 1945, the Western Allies had driven back Hitler's last, desperate effort in the Ardennes. However, the Allies' insistence on Germany's unconditional surrender deterred the Germans from making any concession over ending the war - Hitler and the Nazi faithful saw their only option to be a fanatical Wagnerian stand leaving only Germany's ruins to commemorate the tragedy. Further, it was already clear that another kind of war was right around the corner. The Soviets had already reached Budapest and the Oder River; it was obvious who would dominate Eastern Europe. The only hope for America and Britain to retain what they could of Central Europe was to take Berlin, but the 'Russian steamroller' forestalled them. Massive Soviet forces attacked the city in April 1945 - the last act of the confrontation between the Communists and the National Socialists and the first act of the Cold War. Illustrated with color and b/w photographs, color maps, 8 aircraft and 9 armor profiles, and 14 color uniform plates; Stavropoulos, Vourliotis, Terniotis, Kotoulas, Valmas, and Zouridis. Great Battles of the World; 128 pages.

SS5605 - ELCO 80 PT Boat On Deck



Say "PT Boat" and the image that comes to mind is that of the 80-foot patrol torpedo boat built by the Electric Launch Company (ELCO) in Bayonne, New Jersey. A trio of Packard marine engines, delivering 1200 to 1500 horsepower each, gave the PT Boats speeds of 40 knots. Packed Over 200 photographs, plus color art and profiles; 80 pages.

Shown here is a selection of some of the most popular titles, many more available

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Logs and concrete were added
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Finnish Defiance

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1/35
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